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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

MANHUNTING: A METHODOLOGY FOR FINDING PERSONS OF NATIONAL INTEREST

by

Steven Marks
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June 2005

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The asymmetrical threats that challenge U.S. national policies are not large standing armies, but rather individuals who seek to usurp and coerce U.S. national interests. The nature of today's threats call for the U.S. military to change from finding, fixing, and destroying the enemy's forces to identifying, locating and capturing rogue individuals in order to destroy networks. To counter such threats, the USG will have to quickly and efficiently identify and find these targets globally.

Unfortunately, no military doctrine, framework or process currently exists for finding and apprehending these Persons of National Interest (PONIs). Since military planners and intelligence analysts are neither educated nor trained in the methods or procedures necessary to find and capture PONIs, this thesis will propose a methodology to do so. This involves the development of an analytical process, and an organizational structure and procedure to identify and locate PONIs. Consequently, the United States government's ability to prosecute the war on terrorism today, and to find and apprehend PONIs in the future, depends on its ability to develop and institutionalize a comprehensive manhunting strategy now.

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ABSTRACT

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EXECUTIVE SUMMARY

Since the September 11 attacks, the United States government has drastically shifted its priorities to the Global War on Terror. Billions of dollars have been spent setting up various counterterrorist centers. Academics and analysts alike have written on the perplexing issues surrounding terrorism and terrorists. Most of this work focuses on how to attack and dismantle networks, the root causes of terrorism, the psychology behind suicide bombers, etc. However, the most important aspect in the war on terror—finding and apprehending Persons of National Interest (PONI)—has received virtually no attention. Little research has been conducted on the nature of manhunting, and this is what the U.S. military, justice, and intelligence communities are currently engaged in.

One problem for the U.S. military is that its traditional rules for conducting combat operations do not necessarily apply to the non-conventional threats posed by terrorists. It is nonsensical to assume that the same methods, frameworks, and strategies used by military planners to defeat a conventional enemy's combat power apply to finding a clandestine fugitive. Further, today's military has numerous new tasks that it must perform in the Global War on Terror, and current U.S. military doctrine does not address many, let alone all of them. This thesis offers a first step in defining the problems specifically associated with manhunting. In this thesis we develop a framework, methodology, and process to assist military planners and intelligence analysts in identifying, locating, and capturing Persons of National Interest (PONI).

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I. INTRODUCTION

Since 11 September 2001, the United States military has been actively pursuing terrorists and disrupting the terrorist support infrastructure. Although the U.S. government (USG) saw initial successes in Afghanistan, the senior al-Qaeda leadership—namely Usama bin Laden and Ayman al-Zawahiri—have avoided capture. With all the technological resources available to the United States government and her allies, we are still unable to locate and capture these elusive men. In fact, Usama bin Laden has been on the FBI's Most Wanted terrorist list since the bombings of the United States embassies in Dar es Salaam, Tanzania, and Nairobi, Kenya in August 1998, and he has yet to be brought to justice.

In October 2001, the United States Military sent Special Operations Forces into the Northern territories of Afghanistan to assist the Northern Alliance with the overthrow of the Taliban regime and the destruction of al-Qaeda. In December 2001, the hunt for bin Laden and al-Qaeda led to numerous military operations in the Tora Bora mountain region. Unfortunately, many senior al-Qaeda leaders, to include Usama bin Laden, were thought to have escaped to the Northwest Frontier Province (NWFP) in Pakistan. Since January of 2002, there has been little evidence to indicate where bin Laden might be. Most analysts believe that he is either dead or being supported by various tribes in the Northwest Frontier Province. Recent military operations conducted by the Pakistani Army have further dispersed the remnants of al-Qaeda.

The clandestine and decentralized nature of terrorist cellular networks has made it difficult for military units and intelligence agencies to identify and locate known terrorists. The success of U.S. military operations in 2001 and 2002 disrupted much of al-Qaeda's infrastructure and forced al-Qaeda to conduct small-scale contingency operations. Even infamous terrorists like Usama bin Laden are difficult to locate when they are forced to go underground and rely on networks, which are hidden from spy satellites, communication intercepts, and opaque human intelligence collection assets.

A. RESEARCH QUESTIONS

1. Primary Research Question

How do military planners and intelligence analysts search, locate, and capture fugitives who operate within networks that offer support, cover, and security?

2. Subsidiary Research Questions

a) What makes it difficult for the U.S. military to capture fugitives?

b) What differences exist between the hiding characteristics of fugitives who operate in a cellular network and those who don't have any formalized organizational structure?

c) What processes do other governmental agencies use to find fugitives?

d) How do social networks, behavior patterns, and environmental factors impact the fugitive's decision-making?

e) How can search game theory be applied to manhunting?

f) What deception and denial techniques do fugitives use to mask their activities?

g) Is there a method to detect active deception by fugitives?

B. METHODOLOGY

In this thesis we define different types of manhunts, categorize fugitives, and identify manhunting strategies using historical cases and analytical methods. Our research draws on interviews with law enforcement personnel, private investigators, bounty hunters, military planners, and intelligence analysts as well as our own personal experience in the field of special operations and intelligence analysis. Our collective experience includes conducting operations in multiple geographical regions, to include Southeast Asia, Central Asia, Africa, the Middle East, and the Balkans. We have conducted and supported operations at multiple organizational levels, from tactical

command to strategic operations at the theater combatant command level. We have also supported manhunts for specific individuals in the Philippines, Indonesia, Malaysia, Thailand, Iraq and Afghanistan.

In the course of our research, we have reviewed the manhunting doctrine of the Department of Defense, FBI, U.S. Marshals, and CIA to include all methods, processes, tactics and techniques used by these agencies to capture fugitives. We then apply analytical tools from various disciplines—social network analysis, probability and statistics, game theory, and linear algebra—to develop our framework.

C. ORGANIZATION

In Chapter II, we identify the problems military professionals face when hunting individuals, the lack of a framework, and the U.S. military's success rates in past manhunting campaigns. In Chapter III, we analyze the theoretical principles of manhunting and discuss the strategies a Person of National Interest will use to evade capture. In this chapter we also address the three elements that influence manhunts—detectability, exposure, and maneuverability. Additionally, we define a set of independent variables, and briefly discuss hunting strategies to include still-hunting, stand hunting, drive hunting, stalking, trapping, and calling.

In Chapter IV we look at contextual and behavioral characteristics that influence the fugitive's course of action and describe various investigative techniques that military professionals can use to locate fugitives. In Chapter V we examine individual deception and denial, and show how it is fundamentally different from military deception. In this chapter, we also consider other elements to be aware of—such as biases—which may adversely impact the investigation. For instance, the proper analysis of anomalies can help the hunter determine whether information is true or false, which may in turn prevent the unnecessary investigation of false leads.

In Chapter VI we concentrate on the development of a manhunting method, to include a framework and analytical process to better understand the complexities inherent to successful manhunting. In this chapter we outline a process to help reduce the scope and complexity of searching for individuals. Chapter VII provides a basic understanding of social network theory and adapts many of these concepts to the practical application of

building social templates for revealing a fugitive's likely comfort zones. Chapter VIII proposes a manhunting organizational structure and develops an organizational process for hunting PONIs. Finally, Chapter IX is our summary chapter, in which we also identify areas for further research, and discuss the limitations of our methodology.

D. BENEFITS OF STUDY

Manhunting is about identifying and locating known and unknown persons of interest. However, this thesis will often refer to manhunting in terms of identifying and locating terrorists. Readers should bear in mind that manhunting encompasses much more than just hunting terrorists. For instance, the techniques we describe can be applied to finding war criminals, as in Bosnia-Herzegovina, or finding deposed leaders such as Saddam Hussein. For the purposes of this thesis, manhunting will be associated with identifying and locating terrorists because finding terrorists is the most pressing concern for the military today.

In addition, easy access to lethal technologies enables individuals and non-state actors to proliferate weapons of mass destruction. The increasing threat from terrorists requires the United States government to enhance its ability to identify and locate these non-state actors. Yet, no doctrine or formalized process currently exits to enhance the United States government's ability to apprehend these individuals. Although we possess a counterterrorist capability to fix and neutralize the threat, we lack the information gathering processes to identify and find the terrorists before they act. As a result, the United States government's (USG's) ability to prosecute the war on terrorism, and to find and apprehend high value targets in the future depends on the USG's ability to develop and institutionalize a comprehensive strategy which includes developing a manhunting organization, doctrine, and a training program.

II. MANHUNTING

A. INTRODUCTION

The purpose of the United States military is to defend the constitution of the United States by deterring war and, if necessary, by achieving victory in battle through overwhelming combat power. However, the complex nature of the transnational terrorist threat has created a new challenge for military planners and intelligence analysts. The traditional rules used during the cold war to protect the United States and her allies have changed. Many of the tactics, techniques, and procedures developed by military units to defeat the communist threat in Europe are ineffective in the war on terrorism. During the cold war era, military commanders were rarely tasked to find, fix, and destroy specific individuals. Although senior enemy leaders were targeted on various occasions, counter-leadership operations (CLO) were characterized by conventional military-style attacks against enemy headquarters or through the use of special operations forces to kill or capture select prominent and visible individuals.

Generally speaking, the U.S. military does not conduct manhunts. There are, however, a few historical cases when the U.S. military has conducted a manhunt to apprehend a specific individual who was not a government agent. The 1916 expedition into Mexico to capture Pancho Villa is a case in point. Pancho Villa, acting on his own cognition, attacked the city of Columbus, New Mexico. Mexico's lack of government control fostered internal instability, which enabled Pancho Villa to conduct a cross-border raid. The Villistas posed a significant threat to U.S. citizens along the U.S.-Mexican border. The United States government, at the time, had no other recourse available except to use the military to conduct a massive search for Pancho Villa and his bandits. The Pancho Villa expedition is a rare case and not a military norm.

Like Pancho Villa, today's non-state actors represent a significant threat to regional security. In many cases, the host nation's ability to maintain internal stability is hindered by local popular support for the non-state actor. Some governments knowingly allow non-state actors to operate from within their borders. In these cases, when a

government cannot or will not contain a transnational threat emanating from within its borders, the U.S. government may have little choice but to conduct operations to protect its citizens.

Yet, throughout history, finding and apprehending an individual from another sovereign nation has rarely been considered a national security issue. Only recently has the military increased its role in apprehending international war criminals, terrorists, and drug traffickers. The U.S. military's limited experience conducting manhunts has created a doctrinal, legal, and procedural void. No established set of systems or procedures has been formalized to specifically address manhunting within the confines of military operations. Consequently, the U.S. military approaches manhunting according to established processes created for conventional battle—find, fix, and destroy. Yet, the very nature of finding individuals differs considerably from finding a unit on the battlefield. Identifying and locating an individual requires significantly different analytical methods and processes.

B. FRAMEWORK

Although today's military may have some capabilities within its repertoire that can be used for manhunting, it has not developed specialized systems or the organizational capacity to find Persons of National Interest. The traditional rules for conducting combat operations against a Soviet invasion of Europe do not apply to the non-conventional threats posed by individual terrorists. For example, the principles of war were developed to frame the strategies and tactics for victory. Exploring the nine principles of war—mass, objective, offensive, surprise, economy of force, maneuver, simplicity, security, and unity of command—should immediately suggest why the U.S. military has difficulties conducting manhunting operations. For instance, combat units that maneuver on the battlefield may use cover and concealment to protect and mask their signature, but eventually these units must go on the offensive to gain the initiative to obtain victory. To exploit the initiative, an enemy may use surprise to strike at a time, place, or in a manner that is not expected. However, an individual who wants to avoid capture will never go on the offensive. His goal is to constantly evade, avoid direct contact, and thwart apprehension at a decisive place and time. Furthermore, in many historical cases (as with the hunt for Pancho Villa), employing the principle of mass has

resulted in less than spectacular results. Since, the visible signature of large maneuver units allows the fugitive to evade before being detected.

Further complicating the problems of finding fugitives are the doctrinal tasks military commanders use to accomplish their mission. Traditionally, military commanders are often directed to find, fix, and destroy the enemy. Intuitively, a commander would assume that these tasks should also apply to finding individuals. However, the tasks of identifying, locating, and apprehending means the hunter may need to first identify the fugitive's support infrastructure before a fugitive can be found. Identifying the fugitive's clandestine network of support may be very difficult because relationships that develop within "small world" networks are not usually transparent to outside observers. That is, relationships can date back several years or even decades and there may not be any observable indicator of recent connectedness.

Not only are the tasks associated with apprehending fugitives different, but the decision making process to capture fugitives may also be distinct from traditional military operations. The military decision making process and the investigative process are very similar in form, but vastly different contextually speaking. The military decision making process (MDMP) is used to analyze the effects of terrain and weather, and the enemy's most likely and most dangerous courses of action (COA) based upon his capabilities. These enemy situation templates (SITTEMPS) enable the commander to develop a course of action suitable to accomplishing his mission and intent. On the other hand, the investigative process is a step-by-step procedure that attempts to connect bits of information together to solve a problem or prove a hypothesis. Comparatively speaking, there is a predictive process based on operational norms, while the investigative process is an approach used to connect pieces of a puzzle. While both processes have merit in their particular fields, they are very hard to effectively combine when the military lacks the investigative techniques necessary for conducting manhunts.

1. The U.S. Military's Effectiveness in Manhunting

The argument presented thus far is that the military framework established to win battles may not be applicable for finding Persons of National Interest. We see this most clearly when we examine cases like the Pancho Villa expedition, the pursuit of Persons

Indicted for War Crimes (PIFWCs), the hunt for Usama bin Laden and other members of the al-Qaeda network, and the search for Saddam Hussein.

In 1916 the United States government launched a military expedition to bring Pancho Villa to justice for his attack on Columbus, New Mexico. President Wilson announced that an "expedition will be sent at once in pursuit of Villa with the single object of capturing him and putting a stop to his [Villa's] forays" (Boot, 2002, p. 189). The Pancho Villa expedition was led by General John J. Pershing who initially had a force of 4,800 men with which to search the Mexican state of Chihuahua. Later, Pershing would add additional forces—approximately 12,000 men. Yet, General Pershing's forces were only marginally successful. The search would span 94,000 square miles over rough terrain (Boot, 2002, p. 192). "The punitive expedition killed 135 Villistas, wounded 85, captured 19" (Boot, 2002, p. 202). Interestingly enough, the most successful engagement was not conducted by an infantry or cavalry regiment, but by ten men led by General Pershing's aide, 2nd Lieutenant George S. Patton Jr. This event came about in the following manner: Patton was sent to buy supplies for the men. During this foray, he visited San Miguelito Rancho, which was owned by one of Villa's generals, Julio Cardenas. Patton then deployed his 10 men and three vehicles to block all exits to the ranch. Patton walked up and knocked on the front door, only for General Cardenas to attempt to escape by horseback. Cardenas, unsuccessful in his attempt to leave the ranch, was shot by Patton (Boot, 2002, pp. 197-198).

Under his own initiative, Patton, who was just a general's aide, accomplished a task—to apprehend a person of national interest—that a large cavalry regiment had little success in fulfilling. Although this small group of ten men was able to capture one of Pancho Villa's most trusted generals, Pancho Villa himself was never caught by General Pershing's forces. For the U.S. military, the experience in Mexico never contributed to the development of any type of military procedure, doctrine, method, or organization specially developed for manhunting.

Recent military manhunts for high value targets (HVTs) have continued this tradition of only marginal success. For instance, the table in Appendix A, taken from the International Criminal Tribunal's (ICTY) website, depicts the current status of Personnel

Indicted for War Crimes (PIFWCs) from the Former Yugoslavia. A total of 112 individuals have been indicted, with 27 individuals either cleared, charged, or killed during an attempted arrest (one individual's indictment wasn't complete when he died, which explains the statistical discrepancy). Altogether, 84 personnel have been indicted for war crimes in the Former Republic of Yugoslavia. Of these 84, 25 indictees are still at large, 9 were released pending trial, and 50 are in custody or serving a sentence. 22 indictees surrendered to the appropriate forces, with 6 PIFWCs surrendering as an indirect result of the economic pressure placed on Serbia by the United States. According to the ICTY's data (last updated in October 2002) the U.S. military was responsible for the direct apprehension of 5 individuals over a six year period, which means the US. Government caught fewer than 6% of the PIFWCs (ICTY, 2002).

Unfortunately, statistics are much more difficult to come by for OPERATION ENDURING FREEDOM (OEF) and the hunt for bin Laden and the al-Qaeda Network (AQN). At the 2004 Republican National Convention, President George W. Bush stated that "More than three quarters of the al-Qaeda's key members and associates have been detained or killed" (Isikoff & Hosenball, 2004). This statistic probably refers to the number of known al-Qaeda members prior to the U.S. invasion of Afghanistan in October of 2001. However, due to the lack of information on the composition of al-Qaeda's core leadership the exact numbers are questionable, and can not be corroborated because U.S. intelligence officials have not provided any data to substantiate the 75% statistic. Officials have also failed to explain the methodology behind calculating this percentage. For various reasons, both the data and methodology have been classified, so it is hard to evaluate the USG's measure of effectiveness in apprehending these terrorists (Isikoff & Hosenball, 2004). What *is* known is that Usama bin Laden and Ayman al-Zawahiri are still at large, and they have been so for almost 10 years. This alone calls into question the United States' capabilities to apprehend rogue individuals.

However, there has been greater success in Iraq than in either Bosnia-Herzegovina or Afghanistan. Not only has OPERATION IRAQI FREEDOM (OIF) successfully accomplished the mission of capturing Saddam Hussein, but this operation has netted 44 of the 55 individuals, or 80%, of the persons of interest on the Combined

Joint Task Force Seven's (CJTF-7s) 55 Most Wanted list (Multi-National Corps Iraq, 2004).

We would argue that this is in large measure because finding the remnants of the deposed government leadership in Iraq has been easier than finding transnational al-Qaeda members or, for that matter, PIFWCs in sovereign foreign territory. The freedom of movement and the broad authority of a conquering army are greater than those of a force deployed for peacekeeping or stability support operations. When a conquering force is able to quickly secure a country and cut off points of exit, the invasion force has a strategic advantage in the manhunting game (i.e. the Saddam Hussein case). Often the deposed leadership tries to retain power well past the point where individuals can successfully avoid capture. For example, Saddam Hussein and most of the senior Iraqi leadership waited entirely too long before attempting to seek refuge in a neutral or supportive country. Their avenues of escape, which where open during the initial stages of the war, quickly closed as the invading force seized Baghdad. In comparison, some reports indicate that al-Qaeda's leaders and their families began repositioning themselves well before the United States invaded Afghanistan. For instance, *The London Sunday Mirror* reported that Abdullah bin Laden—the son of Usama bin Laden—and Abdullah's mother Sabiha, brother Malik, and sister Samina, jetted to the United Arab Emirates (UAE) from Pakistan on 15 October 2001, just one week after the aerial bombing campaign was launched against the Taliban and al-Qaeda (FBIS, 2001). Comparing and contrasting these two cases, one could argue that the senior leadership of a government is more concerned with maintaining power, whereas a terrorist organization's priority is survival.

2. The Role of Frameworks in Conceptualizing Problems

The U.S. military's effectiveness in manhunting, described in the previous sub-section, calls into question the U.S. military's ability to conceptualize manhunting. The apparent lack of a suitable framework may be one reason why the U.S. military only achieves occasional successes in manhunting operations. That is, without a framework to properly conceptualize the problem most of the pertinent information that impacts on manhunting could be easily overlooked or mislabeled. Further, the military's development of systems and tools which are thought to assist in solving the manhunting

problem could in fact exacerbate the situation—leading to excessive costs, misleading information, and false conclusions. Only with a proper framework can a problem be properly identified. The following example serves to illustrate this point.

In *Psychology of Intelligence Analysis*, Richard Heuer (Heuer, 1999) explains how judgment is affected by the lack of a proper framework. Heuer describes an experiment in which experienced mechanics were given a diagram ("fault tree" in psychology) that showed them all the reasons why a car would not start. "The tree had seven major branches—insufficient battery charge, defective starting system, defective ignition system, defective fuel system, other engine problems, mischievous acts or vandalism, and all other problems—and a number of subcategories under each branch" (Heuer, 1999). The first group of mechanics was shown a complete tree and tasked to identify 100 reasons for the car not starting. The mechanics were then asked to associate each one of the 100 causes with one of the seven major branches of the fault tree. The second group of mechanics, meanwhile, was shown a partial fault tree with only four major branches (to include a branch labeled "all other potential causes"). The goal of the experiment was to determine how sensitive the test subjects were to incomplete information.

The theory behind the experiment was that if the mechanics were sensitive to the missing information then the second group would choose the "other problems" category for faults associated with the three missing branches. But, the results of the experiment showed that the "other problems" category was chosen only half as often as predicted, indicating that the mechanics who were shown the incomplete tree were unable to fully recognize and incorporate into their judgments the fact that some of the causes for the car not starting were missing. When the same experiment was run with non-mechanics, the effect of the missing branches was even greater (Heuer, 1999). This experiment illustrates how the lack of a framework can prevent an accurate in-depth analysis of a problem, suggesting that, the lack of a framework for finding fugitives may also prevent military planners from adequately addressing the unique problems associated with capturing fugitives.

For example, take the Armed Forces of the Philippines (AFP) hunt for Abu Sayyaf (ASG) leader Khadaffy Janjalani. On 5 July 2003, Khadaffy Janjalani and 30 Abu Sayyaf members on board two outrigger boats arrived in Barangay Libua, Palimbang town, Sultan Kudarat in Southern Mindanao. The AFP immediately dispatched the 601st infantry brigade to the area to capture Janjalani. Yet, during the 601st's five-month deployment to the region, Janjalani was able to avoid capture while operating in a very narrow and limited 10 km by 6 km zone. Even though the 601st conducted MDMP and developed friendly courses of action to apprehend Janjalani, the AFP still failed to apprehend him (Espejo, 2003).

The AFP framed the problem in conventional military terms, and too heavily relied on technology based intelligence collection platforms provided by the United States Joint Special Operations Task Force-Philippines (JSOTF-P). Upon receiving U.S. intelligence information, the AFP began its planning cycle, arrayed its units, determined likely avenues of approach, and maneuvered its forces to engage the target. However, the 601st brigade and JSOTF-P never fully understood the fugitive's strategies to avoid being captured, and never looked to the Abu Sayyaf group's possible deception techniques. These oversights were contributing factors in the AFP's failure to apprehend this rebel group. Further, the absence of a manhunting framework led the 601st brigade to the incorrect conclusion about why the AFP was unable to capture Khadaffy Janjalani—the lack of timely actionable intelligence. Although U.S. and Philippine military planners blamed their failures on slow intelligence, closer examination reveals that key planners did not understand fugitive apprehension strategies. The 601st brigade was never able to operate inside the fugitive's decision cycle and predict Janjalani's next move.[1]

The lack of a framework or the wrong framework often leads planners, decision makers, and analysts down avenues that fail to resolve the problem or accomplish the mission. Our argument is that military planners can't develop an effective course of action to capture a person of national interest when the fundamental principles behind

[1] The co-author of this thesis, Matthew T. Nilson, was the JSOTF-P's Liaison Officer with the 601st Brigade from August to October 2003, and was responsible for coordinating all U.S. intelligence support at the Brigade Level. The discussions addressing the 601st Brigades operations are based on the author's personal observations.

manhunting are misunderstood. In the following sections we develop a framework based on these principles.

3. Two Forms of Manhunts

Two fundamentally different problems exist in hunting Persons of National Interest: 1) finding and apprehending *known* persons of interest, and 2) identifying and apprehending *unknown* criminals, terrorists, or their supporters. Finding and apprehending known individuals leads or amounts to a competition between hiders and finders. However, in the case of unknown criminals or terrorist elements what becomes essential is finding latent perpetrators and facilitators by squeezing the most out of incomplete information. These individuals are generally in fixed locations, but strive to conceal their relationships and activities. Clandestine networks may be difficult to track and identify using technical collection means, primarily because these technical systems are designed to detect observable signatures, yet they can be easily deceived by false signals or overwhelmed by excessive signals.

Further, for these technical collection means to work they must be able to detect patterns of behavior and interactions between individuals. Few technical systems are designed to identify how relationships are formed between individuals, when these relationships were formed, or how strong these relationships are or have been. Meanwhile, if these relationships are unobservable using technical means, the network is able to function below the surface, which offers it still greater freedom of movement.

Yet, through a thorough historical investigation of known facilitators, a deliberate investigative campaign can help identify numerous nodes in a fugitive's criminal support network. *Instead of following the signal, the investigator follows the story*. He identifies incongruities between the stories of different actors and forms theories based on these incongruities. The investigator uses more art then science in his manhunting endeavor.

4. Categorizing Fugitives

To gain a better understanding of the specific fugitive being sought, one needs a system of categorization. Through our analysis of numerous case studies we have developed three preliminary categories: Type-A—individual criminals; Type-B—persons who are members of an organization, and Type C—deposed government leaders. For instance, fugitives like Eric Rudolph the 1996 Olympic bomber or Mir Amal Kasi, the

individual who fired upon CIA headquarters, are characteristic Type-A fugitives. These individuals are not part of any nefarious organization or government entity. Yet, they can destroy infrastructure and disrupt governmental functions. They may or may not fall under the responsibility of local police or federal authorities, but are generally a responsibility of law enforcement. The interesting phenomenon behind Type-A fugitives is that they can find sanctuary from prosecution in foreign countries. Type-A persons of interest usually do not pose a direct threat to national security, but as technology evolves these same individuals may become better positioned to challenge national security in the near future. The key that separates Type-A from either Type-B or Type-C individuals is that they don't have an organization or robust support structure supporting or guiding their activities. Unless they are independently wealthy, their resources tend to be limited. They are predominantly concerned with survival, and not with achieving any strategic objective or maintaining power.

Type-B Persons of National Interest are individuals associated with a nefarious non-state organization or network. Type-B individuals include members of crime syndicates or mafias, insurgent groups, terrorist organizations, and drug cartels. Individuals who operate in organizations or networks of this type can be further subdivided into those who belong to the leadership core, operators, or supporters. Hunting individuals who belong to criminal organizations, terrorist networks, or insurgent groups may be considered as both a law enforcement activity and a mission to protect national security. Manhunts for such individuals may fall within the scope of different government agencies to include the Department of Justice, Department of Defense, and the Central Intelligence Agency. The Pancho Villa expedition is one example where the U.S. military conducted a manhunt for a terrorist/guerrilla group. What truly separates the Type-B individuals from the Type-A lone actor is that organizations have objectives and a robust support structure, whereas individuals have limited support structures and the finite goal of survival. Group survival is important for Type-B Persons of National Interest, but to be successful the group must recruit members and it must have an objective besides pure survival.

Type-C individuals are government leaders, their cronies, and their supporters. Saddam Hussein, Radovan Karadic, and Manuel Noriega are classic examples of Type-C

Persons of National Interest. What differentiates a Type-C from a Type-A or Type-B individual is that the Type-C person is in power and controls or uses government resources. Also, these individuals typically have armed forces and government assets at their disposal to protect them and their regime. Although these individuals may be indicted, law enforcement is usually unable to make an arrest without the help of larger national assets—law enforcement does not have the military might to bring these individuals to justice. The Type-C person typically requires manhunts conducted by military or paramilitary units and executive level approval must be secured before this type of operation is conducted. The nature of the Type-C individual also differs in an important regard from Type-A or Type-B Persons of National Interest (PONI) and is exemplified by Saddam Hussein. That is, individuals in power do not want to lose power. Leaders tend to hold on to their status well after their regime has fallen and, fortunately for the manhunters, the leader's decision to evade is often made well after the invading military has gained significant area control.

The comparison between these three different categories of Persons of National Interest (PONI) accentuates another factor that affects the location and apprehension of individuals—control of the search space. Type-A, B, and C individuals interact differently with their environment. In some cases, the person of interest has sovereign control; in others the hunter has control. The ability to control the search space is critical. In Iraq, for instance, the environment went from not being controlled by coalition forces to being semi-controlled. An environment can be considered either permissive, semi-permissive, or non-permissive for the hunter. The same applies to the PONI. It is often difficult to measure or quantify how permissive an environment is and for the purposes of manhunting this may not be necessary. What is more important is to understand the relationship between the hunter, the evader or PONI, and the environment. That is to say, who controls the search space? If the hunter conducts a search that is external to his area of responsibility then he may be at a disadvantage. On the other hand, if he controls the area of search his chances of success increase.

In many of the most pressing cases, the United States does not have jurisdiction over the area where these persons of interest are hiding, which means these individuals live and operate in a country that may or may not assist the U.S. government with their

apprehension. Sometimes the U.S. government has an extradition treaty with the country where the fugitive is, and extraditions serve as a useful means for law enforcement agencies to apprehend individuals who flee. But, for extraditions to be successful the individual must be caught, and this often assumes that the foreign government has the resources, dedication, and political will to find and apprehend the fugitive. In some situations, the political context is such that a foreign government may actually assist in a rendition; a rendition is the informal transfer of a prisoner to another country.

In some cases, and especially in Type-C manhunts, the U.S. government chooses a course of action that changes the rules of the game. For instance, the hunt for Saddam Hussein would normally be characterized as a non-permissive manhunt, but after the U.S. invasion and defeat of the Iraqi military, the United States gained military control of Iraq. Hence, the U.S. military had internal control of the search space where Saddam was hiding, which increased the likelihood of capture. In comparison, Radovan Karadic former leader of the Serb Democratic Party (SDS), and Ratko Mladic, the Bosnian Serb Army General wanted for war crimes, are believed to be living in southeastern Bosnia or Serbia. According to a BBC report, "The UN's chief war crimes prosecutor, Carla Del Ponte, said in September 2001, however, that she thought he [Mladic] was in Serbia" (BBC, 2002). This was later confirmed by a high-ranking Serbian government official who remains anonymous. If, in fact, these former Bosnian Serb leaders are in Serbia then SFOR, the stabilization force in Bosnia-Herzegovina, can not be said to fully occupy the search space and this search has to be considered a non-permissive search.

Table 1, on the following page, offers a graphic illustration of different types of manhunts. The table shows the type of person being pursued, and the type of control the U.S. government had in each case. Type-B individuals are further labeled as leaders, operators, or supporters, since their operational characteristics impact the manhunt differently.

Table 1. Manhunting Characterization Table (Case Study Examples)

Manhunting Categories	Non-permissive (not-controlled space)	Permissive (controlled space)
Type-A: Individual	Mir Amal Kasi	Eric Rudolph
Type-B: Organizational	al-Qaeda	Symbionese Liberation Army
I. Core Leadership	Usama bin Laden	Donald DeFreeze
II. Operators	Muhammad Atef	William Harris / Patty Hearst
III. Supporters	Yassin al-Qadi (financier)	Miki & Jack Scott, rented a house to the SLA
Type C: Government Leaders	Radovan Karadic	Saddam Hussein

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III. MANHUNTING THEORETICAL PRINCIPLES

As discussed in the previous section, military combat pits two adversaries against each other on a linear battlefield so that they can defeat or demoralize each other by fire and maneuver. In such situations, both combatants are either actively or passively engaged in battle to gain a tactical, operational, or strategic advantage. In the competition between two enemy combatants, the goal is to win the battle by defeating the adversary—both combatants must confront to win. However, a manhunt scenario differs in that each player's strategy is different. The fugitive always wants to avoid capture, while the pursuer always wants to engage and capture the target—the pursuer must *confront* to win, whereas the fugitive must *evade* to win. In this competition between the evader and pursuer, the evader has no requirement to win, just not to lose. Although, the relationship between the evader and pursuer may appear similar to that of combatants—in that there exists a competition between two adversaries—the underlying principles are different. The fugitive always wants to be obscure, unattainable, and ambiguous, whereas a combatant wants to be obscure and unattainable only until he can engage his adversary on favorable terrain.

Since the nature of the game is different, an exploration into the factors that influence the competition is needed. Examining the variables that govern the relationship between the hunter and the hunted will lead to a framework that should yield a logical methodology for conceptually understanding the strategic, operational, and tactical dilemmas associated with the search and capture of Persons of National Interest. This analytical framework should also further our understanding of the three basic apprehension-avoidance strategies used by Persons of National Interest, and assist in the development of counter-strategies.

A. MANHUNTING STRATEGIC ELEMENTS

Manhunting strategies are defined according to three elements: detection, exposure, and maneuver. Each element addresses a component in the process of tracking, locating, and capturing a fugitive. These elements are composed of independent variables that frame the relationship between the fugitive and hunter, and can be used in

various models to help develop measures of effectiveness and identify systems that may not be producing the desired results.

The lack of any clear statistical data hinders much of the research in this area. However, an investigation into the basic components of a manhunt should point us to in the right direction. In this chapter we analyze the two basic functions of manhunts—detection and apprehension. We begin with the final operational phase of any apprehension—the maneuver phase. Next, we address the governing principles of detection. We do not address many of the more humanistic methods of capturing individuals here (i.e. use of informants, trust, and betrayal). Those issues will be discussed in Chapter IV (Investigative Methods and Techniques). For now, we concentrate on the "science" and not the "art" behind manhunting.

B. MANEUVER

The end-state of any manhunting scenario is the apprehension of the individual. The fugitive's capture occurs in either a stationary or dynamic state. That is, the hider/evader is either caught in a fixed location, such as a compound, or he is moving to avoid capture by some means of transportation. Similarly, the hunter can be either stationary in an ambush position waiting for the PONI to move into the "kill zone" or the hunter can actively track him. In either case, both the hunter and PONI are in a dynamic or static state. We can describe individuals in this spatial relationship as being fixed or mobile. If the PONI is fixed, he must either reduce his signature to avoid detection or increase his protection to avoid capture. The criteria 'fixed' and 'mobile' help describe the positional relationships between the two actors.

These criteria are particularly useful to consider when going after a Type-B individual. This is because Type-B individuals belong to pre-existing organizations. If the PONI must maintain physical contact with at least one component element, and if the element or elements are dispersed over a vast area, the PONI's inability to move will directly hinder his operations or activities. The operational requirements for a Type-B individual influence whether he has to move to maintain control. Even if he does not have to move, he must have some method of communication to relay directions or information to other members.

When searching for a PONI the issues of 'fixed' versus 'mobile' are very important. The hunter must understand both his *and* the fugitive's constraints and limitations in terms of fixity and mobility. In many cases, the hunter, especially in a hostile or semi-permissive environment, is limited in his methods of movement and is forced to remain in a quasi-fixed position. Similarly, the PONI can also be stuck in a fixed position depending on his capabilities, organizational structure, visible signature, and available resources. Additionally, an immobile PONI is much more difficult to detect than a highly mobile individual because the hunter's eye—especially when enhanced by technical means—can detect motion. Mobility generally increases the visibility of the target, thus improving the hunter's ability to detect the PONI. ("Detectability" will be addressed in greater detail later in this chapter.)

We can also express this mathematically. At any given time (t) the PONI and Hunter are located at a defined location (L). If the PONI is stationary at $L_1(t_1)$ and the Hunter is stationary at $L_2(t_1)$ than the PONI can not be caught at time (t_1). An apprehension is only feasible when the target and hunter are at the same location at the same time. If, on the other hand, the target remains fixed at L_2 for a duration of (t_2-t_1), and the Hunter moves to L_2 over that same duration (t_2-t_1), then the Hunter should apprehend the target at $L_2(t_2)$. In other words, two fixed subjects at two different locations will never meet. Although this concept is rather basic, the derivations when either one or both actors are mobile have significant implications in manhunting operations. These concepts of mobility and fixity, and their relationship are depicted in Figure 1 below.

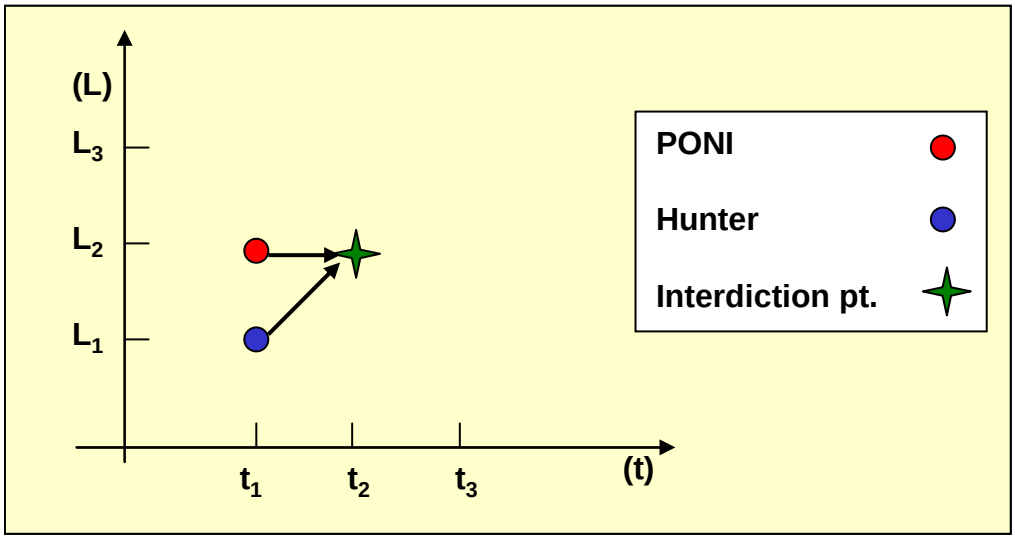

Figure 1. Fixity and Mobility Concept Chart

The concepts underlying mobility are paramount in the apprehension of a target, and the analysis of mobility can provide exceptional insights into the identification, location, and course of action pursued by a PONI. Questions related to the PONI's mobility are as follows: can he move, how fast can the he move, how far can he move, what is his method of movement, when can (or does) he move? The answers to these questions help create a template for developing a course of action to assist in his apprehension.

Coincidentally, basic deer hunting strategies incorporate similar concepts. For instance, deer hunters employ stand hunting, still hunting, stalking, calling, driving and trapping to increase the probability of shooting a deer. In stand hunting, deer hunters analyze the terrain and the normative behavior patterns of the deer to determine the deer's likely avenue of approach. Next, the deer hunter places a deer stand or hide in a location that provides excellent observation over the deer path. With luck the deer will walk down the path and the hunter hill shoot his prey. In this scenario the hunter remains fixed while the deer is mobile. This technique works best when the target is active in a given area, and the hunter has enough time and patience to wait. (Hunting Methods, 2005) Stand hunting offers many advantages and disadvantages in comparison to other hunting strategies.

"As the name implies, still hunting is walking stealthily through an animal's habitat, stopping frequently—sometimes for long periods—to scan and listen for game"

(Hunting Strategies, 2005). Still hunting allows the deer hunter to actively pursue and kill the deer. In this scenario, the hunter not only has to understand the terrain and the deer's normative behavior patterns, but also the deer's adaptive behavior patterns. This strategy allows both the deer and the hunter to operate in a mobile state. A variation of still hunting is stalking. "The difference between still hunting and stalking is that when stalking, you follow signs leading to a particular type of game or group of animals, or close the distance to game already spotted" (Hunting Strategies, 2005). There is also drive hunting. In drive hunting, or flushing, the drivers push the deer to a point where the posters or hunters are positioned. This is an excellent strategy to use when deer are hiding in thick brush.

Two other methods to catch prey are calling and trapping. Calling is the opposite of drive hunting in that calling lures the prey out of a concealed or secure location by incorporating different signals. Here false signals are used by the hunter to trick the prey into revealing itself, whereas trapping is when the hunter baits or sets a trap and waits for the target to fall for the ruse. The fundamental difference between calling and trapping is that calling requires active participation & presence by the hunter, whereas trapping does not.

Direction and velocity are two variables that are important in stalking and still hunting because both the deer and the hunter are moving. For the hunter to shoot a deer, he must be on a trajectory that interdicts the deer's direction of travel, and he must have a velocity that will allow him to overtake his prey. If both the deer and hunter follow a similar path, then the hunter must possess a greater velocity than the deer. For the deer to successfully avoid being shot at, the deer must have either a higher rate of speed or change its direction of travel away from the hunter's. This will lengthen the distance between the deer and the hunter, and the greater the distance between the two the safer the prey will be. We would argue that these same principles apply to manhunting.

In the case of a mobile PONI targeted by a stationary hunter, the hunter must be able to predict the PONI's avenue of approach. The hunter must be very patient and confident in his abilities to predict the PONI's movement patterns. When the hunter is fixed, he can only capture the PONI when the PONI is at his location. In this situation,

time is a relevant, but not a dependent variable. In other words, for the hunter to catch the PONI he must know that at some time the PONI will be located in his space. The time frame could be a few days, weeks, or years, but eventually the target will approach. How does the hunter know where the PONI will go? For some hunters this determination is intuitive, but for most such a judgment is based on years of experience and intimate knowledge of the "game" being pursued. As for targeting PONIs, this depends on the hunter's ability to understand the effects of *social* and not just *physical* terrain and the PONI's normative and adaptive behavior patterns.

In cases where the PONI is hiding in a fixed position, the hunter must know where the PONI is and successfully move to that location without being detected. Here, the key to success depends on locating the target. In *Hunting Down Saddam: the Inside Story of the Search and Capture*, Robin Moore describes an individual referred to as "the source," who gave U.S. military planners the type of detailed information necessary to locate Saddam Hussein (2004, pp 245-250). Finding individuals in fixed bunkers or underground tunnels can be difficult by technical intelligence collection means. In many cases, like that of finding Saddam, the key to successfully locating a fixed PONI is by gathering information from individuals close to the target.

C. DETECTABILITY.

Essentially, before a target can be caught the hunter must first be able to find him. The ability to find a PONI is directly related to the hunter's ability to detect him. "Detectability" is comprised of two independent variables: visibility and acuity. Visibility is the size or strength of a signature left by the PONI, whereas acuity is the hunter's ability to detect the PONI's signature. A signature can be visible, audible, electronic, or take on any other form so long as it is perceivable.

1. Visibility

Visibility is a very important component for both the hunter and the Person of National Interest. If the hunter is very visible then the PONI will be able to maneuver to avoid the hunter by watching his activities. If, on the other hand, the PONI is very visible then the hunter's ability to identify, track, and locate the individual will be much easier. However, just because there is no visible signature does not necessarily mean that the fugitive is not present. The PONI may be emitting a signature that is out of sync with the

hunter's collection systems. A useful analogy is the light spectrum, pictured below in Figure 3.

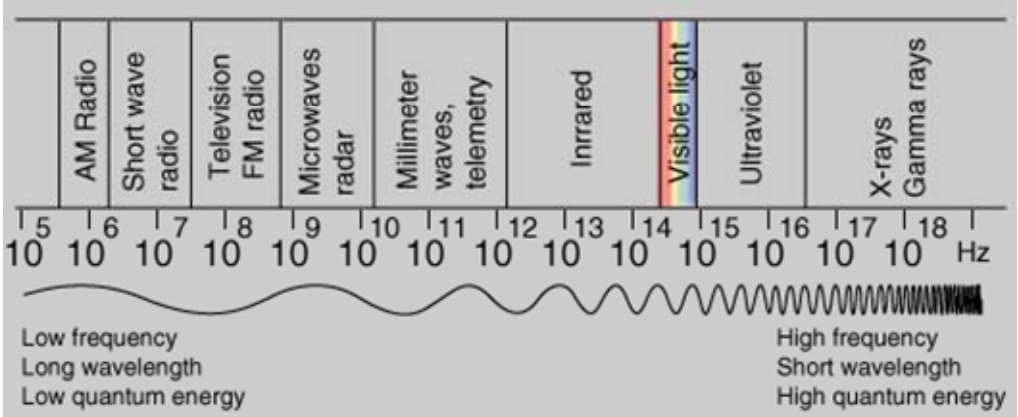

Figure 2. Electromagnetic Spectrum (from Nave, 2005)

The human eye can only see a narrow band of the electromagnetic spectrum—the visible light spectrum. The human eye cannot detect infrared or ultraviolet light, but that does not mean they do not exist—they are just not perceived by the human optical system. Similarly, the intelligence spectrum only detects certain kinds of intelligence. For example, SIGINT detects signals intelligence; HUMINT detects human intelligence, and so on. However, just because the SIGINT has not identified any signal to confirm or deny the presence of a PONI does not mean the PONI is not present. It just means that the method of collection is out of phase with the PONI's visible signature.

2. Acuity

Acuity is another important factor in the ability to detect and observe the target. The key for the hunter to detect the PONI is to increase resolution on his signature. That is, the hunter must collect intelligence in the venue where the PONI operates, thus putting the hunter in phase with the PONI. Type-B PONIs, for example, can send signals within their organization in a manner or at a time that is unobservable by the hunter. Acuity is especially useful in conjunction with social network analysis. Assuming that a PONI uses his social network to help him hide, the hunter can gain clarity on the network by identifying secondary and tertiary sources who know where the PONI is hiding.

Analysis of visibility and acuity reveal certain relationships that impact how well the target can avoid being detected. In many cases, the hunters have a sensory advantage

over the PONIs, but in others the hunter may in fact be at an intelligence collection disadvantage. Figure 3 illustrates a case where the PONI has an intelligence collection advantage. The PONI gives off a visible signature, which is represented by dark red. That represents how he is, while the hunter's acuity is represented as light blue. At no time does the light blue oval overlap the dark red ellipse—the hunter cannot see the PONI before the PONI sees the hunter. This illustration applies to all types of intelligence collection.

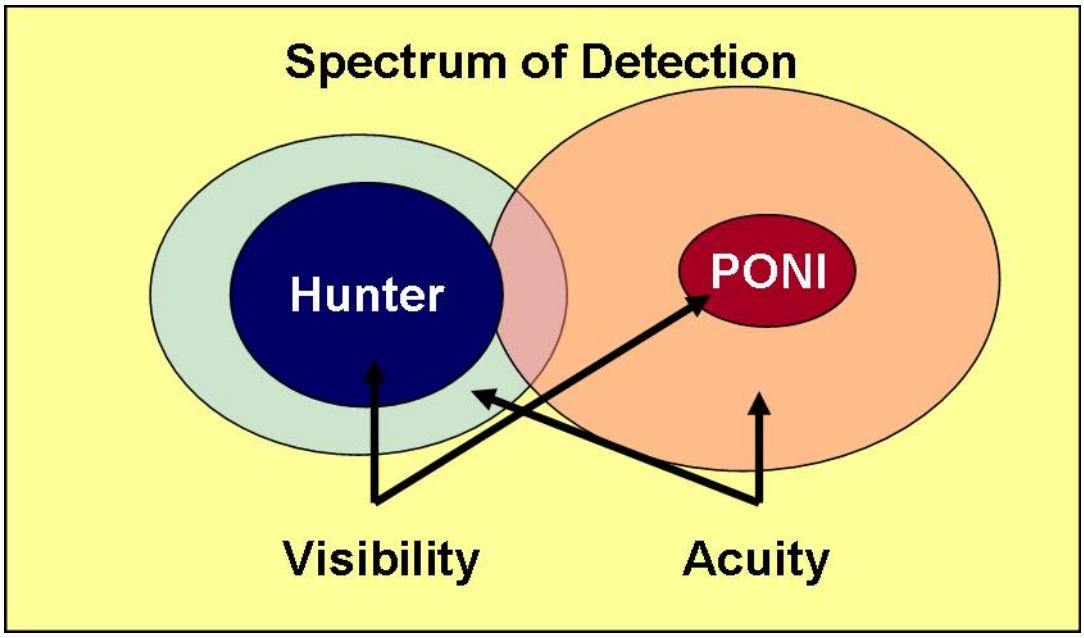

Figure 3. Visibility Advantage Diagram

More to the point, if the PONI's intelligence collection systems use human sources to report information on the hunter's movements, then the PONI can move before the hunter reaches his objective. Further, if the hunter's visibility to acuity ratio (V/A) is small then the hunter has a better chance of detecting the PONI, whereas a large (V/A) ratio means that the hunter has a better chance of being spotted first.

Returning to the light spectrum example can help us further conceptualize some of the theoretical pitfalls of intelligence collection. Every different type of intelligence collection means—HUMINT, MASINT, SIGINT, IMINT, and OSINT,—can be represented by a simple equation: Visibility times Acuity equals Detectability or $(v \square a)=d$. A detectability equation for signal intelligence collection is $(v_{sig} \square a_{sig})=d_{sig}$, where v_{sig} represents the visible signal of the PONI and a_{sig} represents the acuity of the signal

collection system. If either a_{sig} or v_{sig} is equal to zero then the PONI will not be detected with that type of collection system. That means, if the PONI is not emitting the type of signal that the collection platform is attuned to detect, than the PONI will not be seen by the hunter.

This concept can further be graphically depicted by using overlays. A visibility-acuity overlay represents what the hunter can and cannot detect along various intelligence collection spectrums, and an example is shown in Figure 4. For instance, the red squares represent different HUMINT sources that have access in a given area; the blue represent specific imagery of that grid square; the black squares represent intelligence collection dead zones. Intelligence collection dead zones are areas where intelligence collection assets are unable to detect information. Using such overlays would be extremely helpful for identifying shortcomings or holes in the intelligence collection plan. Additional collection assets can then be directed toward these intelligence voids.

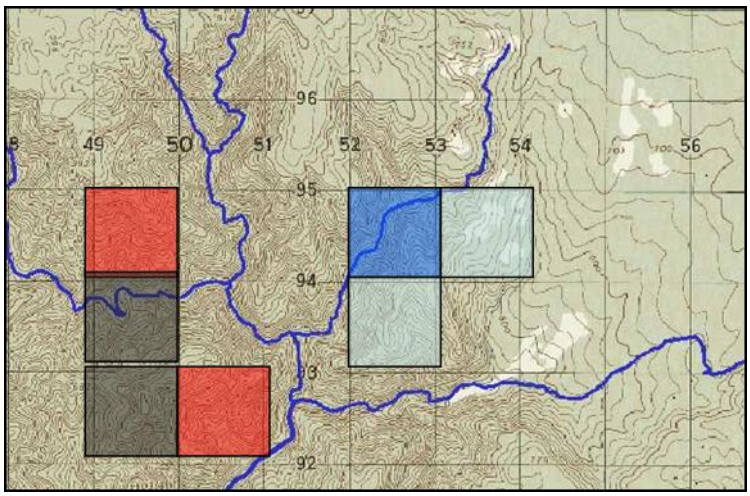

Figure 4. Visibility and Acuity Overlay

D. EXPOSURE

Thus far we have discussed the theoretical variables behind finding and catching individuals, but in many manhunts a third variable seems to describe the behavior of successful hiders. In a competition between two individuals—hider and finder—a set of constraints shape the rules of the game. These rules themselves restrict the players to certain allowable activities. For instance, political and legal restrictions shape the individual's activities, especially when legal constraints are present in the form of

jurisdictional boundaries. Sovereign borders are among the greatest allies a PONI can have. By understanding constraints and limitations associated with sovereignty, both hunter and PONI can identify countries and locations that can help them each achieve their specific objectives.

The ability for the hunter to capture the PONI is only possible when both occupy the same bounded region. Figure 5 below contains three regions—Regions A, B, and C. In this example, the hunter operates in Regions B and C, and the PONI operates in Regions A and C. As long as both PONI and hunter operate outside the intersected Region C, then it is physically impossible for the hunter to catch the PONI. If Region B and Region A do not intersect, then the two operational areas are mutually exclusive and an apprehension cannot occur. Consequently, the goal of the hunter is to have as much access to the PONI as possible—ideally the hunter wants the PONI to flee to Region C at the same time the hunter should shrink the space in Region A.

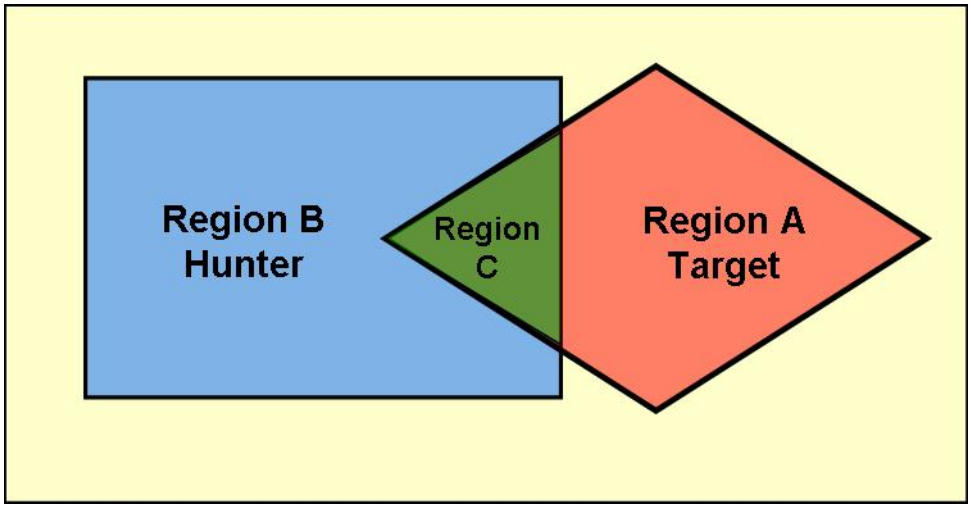

Figure 5. Mutually Exclusive and Apprehension Zones

Constraints and limitations expand beyond physical space to include time, resources, and capabilities. Limited communications equipment or limited means of transportation can constrain the PONI's avoidance plan, especially if the PONI is a Type-B individual with operational objectives. Other sets of limitations, which are difficult to measure or represent on a map, include religion, and ethnic or cultural constraints. For instance, an Arab who operates in either Southeast Asia or Central Asia may have to adapt some of his behaviors to better integrate with the local populace. These social

effects can constrain activities to certain geographic spaces just as legal or political constraints do.

Lack of exposure helps to explain why many fugitives are not caught. For example, Usama bin Laden either explicitly or implicitly understands the effects of exposure on his survival. Bin Laden has a solid history of fleeing to countries that provide the sovereign protection he needs to avoid apprehension by the U.S. or Saudi Arabia. Bin Laden has also maximized his survival in the past by manipulating the political environment to support his activities, and one of his greatest attributes is his ability to develop bonds of trust based on a shared cultural and/or religious identity. Currently, bin Laden is believed to be in the Northwest Frontier Province in Pakistan, an area that is controlled by tribes supportive of Usama bin Laden's cause. This *social* protection helps limit his exposure to Pakistani and U.S. forces. To further address the variable of exposure, the following section will discuss exposure's two independent variables: accessibility and vulnerability.

1. Accessibility

Many successful fugitives are able to avoid capture by minimizing their exposure. The fugitive achieves this objective by finding a location to which he has access, but the hunter does not. Historically, the Underground Railroad served as a conduit to help slaves escape into Canada. Today's fugitives also flee to foreign countries where the political and legal constraints prevent their extradition. Critical to our framework is determining accessibility in terms of the terrain's effect on the hunter's ability to gain access to the PONI. If we return to Figure 4, only in Region C does the hunter have access to the PONI. Therefore, only Region C provides the hunter with the opportunity to capture the PONI; this is the only location where the fugitive is vulnerable. Therefore, we would argue that the hunter's accessibility has to be considered a critical component in the fugitive's vulnerability.

2. Vulnerability

Vulnerability refers to how susceptible the fugitive is to being captured. If the hunter has no access to the PONI's location, the PONI is not very vulnerable. Referring back to Figure 4, we see that the fugitive is only vulnerable in Region C. Additionally, if

a group or organization protects the fugitive then the fugitive is not as vulnerable to capture. The extent of vulnerability can depend on many factors—political, economic, informational, and legal. These factors define the relationship between the hunter and PONI and can be geospatial, and represented by operational zones. These zones can help identify the optimal locations for the PONI to hide based on objective criteria.

Constraints also create opportunities for both the fugitive and hunter. Given the potentially dynamic nature of the game, the PONI may be vulnerable for only a limited time. Thinking in terms of exposure is useful because it provides an analytical means to identifying optimal hiding and apprehension locations. By measuring vulnerability and accessibility, the hunter can identify where the PONI can be caught, and identify the location(s) that maximize the PONI's safety. These theoretical principles allow hunters to systematically think through the strategies the PONI will likely try to use to survive.

E. APPREHENSION AVOIDANCE STRATEGIES

The PONI typically uses one of three general strategies: masking, maneuver, and disengagement. The hunter, on the other hand, has five basic hunting strategies he can use: still hunting and stalking, stand hunting, drive hunting, trapping, and calling. The masking strategy is probably the easiest for military personnel to understand because it incorporates the concepts of concealment and cover. The PONI is using a masking strategy whenever he incorporates deception and denial into his operations. The PONI is hiding or concealing his true identity, location, or support network, and uses denial by preventing the hunter from gathering information on the target.

Masking is a strategy used by the PONI to reduce his visible signature. Many different techniques can be used to mask a signal, such as noise and concealment. With noise, the hunter can not effectively identify the PONI because too much information overloads the hunter with data. Concealment, on the other hand, is when the fugitive hides his true self. For instance, international fugitives often create aliases and false documents to hide who they truly are.

Deception involves many different techniques to prevent intelligence collection assets from gaining resolution on the fugitive. The art of denial also plays a role in masking. Unlike deception, denial involves the deliberate attempt by the fugitive to

prevent access to information. That is, the fugitive prevents intelligence collection assets from penetrating his zone(s) of influence. The key for the fugitive is to hide the truth while *simultaneously* showing a false positive. Sir Francis Bacon, an English philosopher and intelligence officer, first introduced these ideas in 1625 when he wrote Essay No. 6, which outlined the concepts of simulation and dissimulation. Dissimulation is "when a man lets fall signs and arguments that he is not that he is" (Bacon, 2001). Simulation is "when a man industriously and expressly feigns and pretends to be that he is not" (Bacon, 2001).

The second, and arguably most effective, strategy used by PONIs to avoid capture is disengagement. This is the safest strategy because it allows the PONI to operate in an environment that prevents him from being captured. That is, he operates in an area that is not accessible to the pursuer. The pursuer cannot gain access to this zone because of certain constraints and limitations, whether political, economic, legal, military, or geographic. For example, the 601st infantry brigade from the Armed Forces of the Philippines—previously described in Chapter II—was limited in its search of the local Barangays. In the Philippines, as in the United States, law enforcement officials have certain laws that govern their activities. These laws are established to guarantee individual rights, and one of these involves the need for probable cause. Before the AFP could search a suspected sympathizer's residence, the AFP had to first show probable cause. Unfortunately, these legal constraints enabled Janjalani to remain outside the realm of legal jurisdiction, while the Philippine military had to operate inside certain legal boundaries. In this case, the 601st brigade was unable to capture Janjalani because legal limitations created a certain physical space—a sympathizer's residence—to which the unit had no legal access.

Here too, mobility helps the PONI to move at a time, to a place, or in a manner that is not expected by the hunter, which optimizes his ability to avoid being captured. For instance, the 601st brigade rarely conducted night operations, thereby allowing Janjalani and his supporters to operate freely from dusk till dawn. Although imagery may have identified named areas of interest (NAIs) at 2200 hrs, by the time a unit from the 601st brigade arrived at that NAI the target had moved to another location. The

effects of time enabled Janjalani and the Abu Sayyaf Group (ASG) to remain one step ahead of their pursuers.

IV. INVESTIGATIVE METHODS AND TECHNIQUES

In April 2005, the largest national fugitive dragnet ever, code named Operation FALCON, arrested nearly 10,500 fugitives in the space of just a week, the result of a massive push by the US Marshals service, the oldest of the federal law enforcement agencies. Although the U.S. Marshals average over one hundred fugitive arrests each week, it wanted to see how much further it could go. By joining with police from all 50 states, involving more than 3,000 law enforcement officials with much of the muscle coming from 206 state law enforcement agencies, 302 county sheriff's departments, and 366 city police departments, the US Marshal service increased its apprehension rate by nearly eight times its usual weekly record. Officials said fugitives were tracked in every state, including Puerto Rico and Guam (Dragnet nabs, 2005).

In 2004, US Marshals apprehended over 36,000 felons and worked alongside state and local law enforcement to capture an additional 31,600 felons (Dragnet nabs, 2005). Several factors explain the success of the US Marshals. First, the ability to coordinate a massive manhunt of this size requires thorough planning and exceptional intra-agency coordination across local, state, and federal levels because fugitives can be dangerous. Second, of those apprehended during Operation FALCON, 70 percent had prior arrests for violent crimes, meaning the Marshals already had a booking sheet filled out on each felon, detailing the arrestee's name, address, bio-metrics, aliases, etc. Furthermore, the standard operating procedure for first time felons prior to entering a detention facility is to have them fill out a questionnaire to determine which prison cells should be off-limits, given certain ethnic, gang, and religious affiliations. The questionnaire is quite specific and probes about information on ethnicity, gang affiliation, languages, relatives, business acquaintances, girlfriends, wives, and children. All the answers include a last known address. First time offenders consider this questionnaire necessary to their survival because it is suppose to guarantee that they do not share a cell or floor with revival gang members. But no less critical to the US Marshals' success was the fact that their dedicated hunter teams are granted the authority to pursue a fugitive across jurisdictional boundaries. The team is thus able to build intimate knowledge of the fugitive's behavior at levels not possible in the past because of discrepancies that occur in case file hand-off.

These three significant factors provide the US Marshals the capability to apprehend fugitives at the local, state, and federal levels. The US Marshals' best practices, therefore, are worth our attention. So, too, are those of the FBI, bounty hunters, and private investigators. By studying an array of tactics, techniques, and procedures used by the most successful manhunters we should be able to develop an overall manhunting methodology. Such an investigative process includes identifying possible hiding locations or pinpointing individuals in the fugitive's support structure who can help locate wanted felons. As America's leading and most feared bounty hunter, Bob Burton, says, "ultimately, your search will lead you to the two stars of this trade: the fugitive and the Judas who betrays him" (Burton, 1990, p.30). There is no reason to believe that some of these processes couldn't also be applied to hunting down international terrorists.

A. WHAT DO FUGITIVES DO?

Commonalities exist among all types of manhunting, whether the hunter is pursuing a common criminal, international fugitive, or a terrorist. Fugitives tend to choose one of three types of places to avoid capture. A fugitive's first choice is to typically ask friends or family to hide him and provide him money and support. Second, he might gravitate to rural locations that are culturally familiar and where he feels comfortable blending in. Third, fugitives sometimes settle down in a dense urban area where they can hide in plain sight. Likewise, there are three patterns associated with avoiding capture and each fugitive typically will choose one of these. Planned flight is used by a fugitive who has taken the time to recognize that he is a fugitive; either he committed a crime, jumped bail, or planned an escape. Usually, this type of fugitive has coordinated for support and has access to identification cards, driver's licenses, and passports. In contrast, a sudden opportunity fugitive realizes he has the ability to flee and jumps at the chance without establishing a support mechanism to facilitate his escape. A fugitive who has committed a crime of passion or is reacting to an event represents the third type. The second and third type of fugitive does not have much time to consciously plan an escape or put support mechanisms into motion. For this reason it is imperative the investigative response begin immediately. Putting pressure on the fugitive causes stress, allows the hunter team to capitalize on the fugitive's mistakes, and increases his risk of capture.

Typically a fugitive will try to eliminate, minimize, or conceal contact with his family, friends, and associates to increase his chances of success. Initially, he will try to minimize his predictable and personal habits. But, according to FBI psychological profilers at Quantico, every person has a public, a private, and a secret life. 'Public' refers to how he presents himself in public, while 'private' is how he acts around friends and family. More difficult to assess is an individual's secret life, which is comprised of those things he does not want even his family to know about.

The fugitive will try to minimize his level of risk by relocating to suitable areas with access to food and water, or at least areas that are favorable for his survival. He will try to assimilate into the community by either blending in or making himself invisible. Often, fugitives engage in "risk management" strategies, trying to reduce the risk of being captured. Several case studies reveal fugitives who have avoided contact with friends, relatives, and associates, thereby changing their behavioral patterns and decreasing their predictability. Often fugitives who are successful will be financially prepared to move at a moments notice, often keeping $10,000 in every blazer or jacket so that no matter which coat they grab they can be gone in an instant. Of the fugitives that do get captured, most are usually caught because they have a bad habit that can be exploited, or they leave an easy-to-follow signature. Based on our interviews with law enforcement, most fugitives are captured thanks to their fondness for women, booze, or phones.

B. THE BASICS

Understanding the basics of investigative work allows the investigator to ask the right questions of an intelligence analyst and of potential sources. Coordinating and conducting investigations through detecting and collecting physical evidence, and identifying, locating, and interviewing witnesses, victims, targets, and other third party sources of information to compile facts, evidence, and opinions pertinent to the investigation sounds like a lot of work, but this ultimately leads to locating the fugitive. However, even the first step, understanding what is in a name, can help narrow the scope of the search. For instance, the Asian Gang Task Force Commander for the San Francisco police department must have the proper spelling of the fugitive's name and the

way the full name is arranged (first and last name) prior to beginning his investigation in order to accurately search both US and Chinese databases for possible leads.

Collecting information to build the fugitive's profile, to include names and aliases, date of birth, a physical description, pictures or sketches, and documentation (passports, social security numbers, birth certificates, driver's licenses, voter registration card, etc.) points the investigator in the right direction. An investigator will start with the fugitive's last known location and work backwards, interviewing friends, relatives, and neighbors, making sure to ask questions about the fugitive's personal preferences, especially relating to women and favorite hang-outs. By asking questions about the fugitive's personal habits, routines, and preferred locations (home, office, and bars) the investigator is determining 'comfort zones'. Fugitives tend to return to these comfort zones or places of familiarity because they feel at ease and safe. If the fugitive rides a Harley Davidson, frequents biker bars, and is covered in tattoos, then there is a reasonable chance he will not be found in an upper middle class section of town or playing golf at the local country club. For a fugitive from the Middle East or Southwest Asia, understanding the tribe, clan, and village where the fugitive is from helps the hunter narrow the search. Therefore, "fugitive recovery can be thought of as an *information* profession." (O'Connor & Copeland, 2003, p. 94)

C. MIR AMAL KASI CASE STUDY

In 1993, Mir Amal Kasi, a Baluchi migrant, shot and killed two people and wounded three at the entrance to the CIA Headquarters in Langley, Virginia. The CIA Counterterrorist Center (CTC) asked the Islamabad station for help in recruiting agents to find Kasi. A family-based group of Afghan tribal fighters, whose training began back with the CIA during the Soviet invasion of Afghanistan, was hired to help in the search. The CTC Kasi cell secured budgetary approval and shipped cash, weapons, and communications equipment to Islamabad. If Kasi was found in Pakistan, the Afghanis were to contact the CIA Station-Islamabad and case officers would then attempt to work with Pakistani Inter-Services Intelligence (ISI) and police to make an arrest without revealing the existence of their paid Afghan agents.

Initially, Kasi could not be located, but was rumored to be moving throughout Taliban- controlled Baluch province. However, due to a deteriorating relationship

between ISI and the CIA, the CIA received little intelligence or access to Pakistani police resources in the Northwest Frontier Province. Even if the CIA could locate Kasi through their own sources, they would probably not be able to apprehend him because of an even greater problem: the several centuries old clan and tribal protection code available to any Baluch in danger. Although the CIA offered an enormous reward, under traditional honor and revenge codes; no one could turn Kasi over to the Pakistani police or even provide information of his whereabouts because of possible retaliation and tribal disgrace. Nearly five years after the ambush of CIA headquarters, the CIA received a tip that Kasi was in a compound close to the Afghan border near his hometown, but the ISI would not attempt to arrest him.

In the end, it was a Baluch man who walked into the US consulate in Karachi and announced he had information about Kasi's whereabouts. The source claimed that Kasi was under the protection of a Baluch tribal leader, but Kasi had fallen out of favor with the tribal leader so the tribal leader now sought the reward money. An arrest plan was formulated between the FBI and the Baluch tribal leader. While Kasi lay asleep in his hotel room the FBI kicked in the door and slapped handcuffs on the wanted felon (Coll, 2004).

With manhunting there are many heartbreaks and letdowns; it is "always darkest before the dawn." But being patient and persistent, with the ability to remain flexible and adaptable regardless of the situation, will always work in the investigator's favor. It is best to think creatively or "outside the box" and be imaginative, while still maintaining attention to detail. The investigator must have the ability to develop, retain, and cross-reference information from many sources and use all this information to maximum advantage. For instance, being familiar with the level of military or survival training the fugitive might have is essential when trying to determine his ability to avoid capture when pressure is applied. Keeping a list of telephone numbers, including those for his home, office, cell phones, wives, and girlfriends allows the investigator to track the fugitive through surveillance tagging devices when technology is available. It is also important to know how many languages the fugitive speaks. This helps in recognizing potential collaborators and comfort zones. Cataloging special medical problems can likewise point investigators toward specific treatment requirements.

D. CARLOS THE JACKAL CASE STUDY

In his book, *Hunting the Jackal*, former Special Forces Sergeant Major and CIA operative Billy Waugh shares his 55 years of experience hunting international fugitives, including Carlos the Jackal (aka Illich Rameriz-Sanchez). Key lessons Waugh conveys are: know the environment better than your prey; and know your fugitive, his operational profile, and behavioral patterns. Pinpoint areas that are suitable for the fugitive, while establishing surveillance points to detect activity. Establish positive identification of the fugitive, and detect and observe enabler activities and patterns. After observing the fugitive's activity patterns, determine where the fugitive has established safe houses and hide sites. Begin surveillance on the fugitive's safe houses, hide sites, and his enablers' activities and homes. Recognizing what habits and addictions the fugitive may have helps identify how and where he is vulnerable.

It was, in fact, Carlos the Jackal's excessive drinking that helped Billy Waugh and his team to find Carlos. During a drinking binge, Carlos waved a pistol at a shopkeeper, and Sudanese authorities were forced to detain Carlos for disorderly conduct. After Hassan al-Turabi agreed to Carlos's release, Carlos made a phone call to his bodyguard, Tarek. Tarek was then directed to come to Khartoum to protect/prevent Carlos from getting into any more trouble. This event was the initial lead that started the search. When Carlos's bodyguard arrived at the Khartoum airport, he was whisked away by the government's secret police. Unfortunately, the CIA team surveilling the airport was unable to follow the bodyguard. The team then began searching places where foreigners were known to stay and, as luck would have it, the CIA team located Tarek in a hotel. The team immediately began surveillance on Tarek and identified the car that he drove. The other major break in the search occurred when Tarek's car was spotted near a hospital. The team immediately began surveillance on the hospital, which is where Carlos was finally spotted. Unknown to the CIA team at the time, Carlos had genital warts, which required frequent treatments (Waugh, 2002, pp 156-177). In this case, it was a string of events brought about by the fugitive's addictive behavior which enabled the team to successfully locate the fugitive.

Essential in finding Carlos was identifying his means of transportation, determining certain modes of travel available to the fugitive and which ones the fugitive

prefers allows the investigator to identify possible locations and patterns of movement. Technology can assist by providing a physical description of the fugitive even five, ten, and fifteen years after he has been sighted. Often fugitives lose or gain weight based on their comfort level. Carlos, for instance, gained 30 to 40 pounds in Khartoum and grew a thick moustache.

E USAMA BIN LADEN: CRITICAL QUESTIONS

In the case of Usama bin Laden, an investigator must analyze certain habits specific to his culture and ethnic background. What does he prefer to eat and drink that is specific to an Arab from a wealthy family, and who might deliver those types of comfort items? What are his sleeping habits? Is he a family man or more nomadic, always needing to move? How does he make or get money to support his lifestyle? Does he tend to operate within his inner circle of friends, and does he only do business with those of the same ideological beliefs? Is he known to operate on his own, or does he need all four wives and children near him? Does he only feel comfortable in places he owns, or will he put trust and safety in other people's hands? Does he maintain ties with political and religious leaders? These and many more questions help build the behavioral profile the investigator must have in order to narrow his search.

After all information is collected, it is helpful to develop a graphic overlay, depicting countries that might offer this type of support. Based on past tendencies and behaviors, Usama bin Laden is likely to be in a country with a weak regime, and where there is also ethnic and religious discrimination. In the past he has based his operations in countries that have experienced recent political upheaval and are adjacent to one or more countries with ongoing strife. Everywhere Usama bin Laden has lived, except Saudi Arabia, has had a poor quality of life and sub-standard infrastructure. Templates that yield information about social factors like these can narrow the search and allow for further investigation.

A very important step in the investigative process is to develop a base-line analysis for potential safe havens. What are the social norms and day-to-day events in the targeted areas? One way to think about this is to imagine Usama bin Laden as a big rock; the safe haven is a body of water. Depending on how bin Laden entered that body of water would determine whether US government collection assets would see ripples or

waves. What would make ripples and what would make waves? Usama bin Laden often gravitates toward businesses or industries with which he is familiar. During the Soviet invasion of Afghanistan, bin Laden was nicknamed "the Engineer" because of his ability to contract construction companies to build roads, schools, and hospitals. He is drawn toward public service and to assisting regimes to improve their infrastructure. Many high profile fugitives are successors to the family business, or have heirs, and locating these can help investigators find the fugitive, or at the very least reveal not just enablers, but also business *rivals* who can also be critical sources of information.

It seems paramount to build the behavioral profile of the fugitive *before* deciding to spend millions of dollars moving personnel to investigate, and before shifting collection assets to increase spying capability. Figuring out what terrifies or worries the fugitive, and what his normative vs. adaptive behavior is, will also assist when the time comes to apply some external pressure to influence his decision-making.

F. LOCATING THE FUGITIVE

Databases like Choice Point or AutoTrack are an inexpensive way to begin the process of locating a person of interest inside the United States, but the same kind of information can be found overseas. What makes these two systems unique is their ability to search public records nationwide and link together their many scattered bits and pieces of information into an electronic dossier, or profile, of an individual. Just by searching for a name, the investigator can obtain current and past addresses, telephone numbers, social security number, date of birth and, more importantly, information regarding friends and neighbors. Local law enforcement officers will usually not only conduct an investigation on a suspected criminal, but also run background checks on his neighbors. Most likely, the neighbors are aware of his criminal activity and may even be affiliated with this criminal behavior. These databases cross-reference a massive amount of publicly available data, including addresses, driver's licenses, property deed transfers, and corporate information (About AutoTrackXP, n.d.). Most private investigators and bounty hunters use databases like these as a starting point for most searches because they are short term solutions given limited amounts of time and money.

Both AutoTrack Plus and Choice Point contain over 4,000,000,000 records, collected and purchased from over 1,000 public and private sources. These two

databases can provide real time searches by dialing into the databases of other computers to perform an extended search and provide instant up-to-date change of address information or directory information. Public record databases require some training to use, but within an hour a search can provide an address and phone number for the fugitive and display a list of where and with whom he has been transacting business over the past several years. One can refine the search to just a first or last name and an advanced search can even yield aliases or nicknames. AutoTrack and similar databases deliver comprehensive information and allow the private investigator to browse through billions of current and historical records to locate wanted felons or witnesses.

In high profile court cases, defense attorneys retain experienced private investigators to locate witnesses who are enrolled in the Federal Witness Protection Program. The first place most private investigators begin their search is by accessing databases like Check Point, AutoTrack, and CDB Infotek. Additionally, drawing together information from a fugitive's prior arrest reports and prison records can provide leads which require further investigation. Focusing on who visited the fugitive in prison, or who he called while in jail, aids in identifying potential enablers. Another method is to track a fugitive's children through a state's Department of Education enrollment database to discover where they are living and which school they attend. Putting the children under surveillance and observing who drops and picks up the kids at school can yield yet more leads. In many cases, fugitives can be found living close to their children, or working at a job close by, in order to keep a watch on them and their mother.

Before online public record databases became available to the public, private investigators routinely spent days in county courthouses researching and uncovering information that could pinpoint the fugitive's location. Collecting information from public, civil, and criminal records along with searching marriage and divorce records often uncovers critical information not found on a felon's Failure To Appear (FTA) worksheet or the jail's booking and property records. The same goes for property records; if the fugitive has ever purchased real estate or personal property then there should be a record of sale and last known address. Many of these same steps can be applied to international fugitives.

In most cases, especially in countries ruled by authoritarian governments, there are court houses or places where important documents and records are kept. In remote areas, the village chief will often maintain these records in order to settle land disputes or family feuds. Likewise, if the international fugitive ever attended a university, there should be a record of his attendance, along with rosters of his fellow classmates. Getting to this information is a lot easier than expected because most universities have faculty from other countries who might provide this information for a small fee. Finally, the FBI's National Crime Information Center (NCIC), which is a database that collects and discloses information from other law enforcement agencies about crimes and criminals, is a popular source of information for those in law enforcement. The data contained in NCIC is supplied by the FBI, local, state, federal and foreign criminal justice departments (Federal Bureau of Investigation, 2003). Every application, database, or piece of paper ever 'touched' may hold a critical missing piece to the puzzle.

G. PURSUING THE FUGITIVE

Persistence, patience, resilience, adaptability, and creativity are the keys to successfully pursuing a fugitive. Quickly recognizing the fugitive's avoidance strategies and capitalizing on mistakes made by him or his associates can help in closing in on his location. Maintaining a level of awareness, keying in on patterns, and changes to patterns allows the investigator to be more aggressive in his search. Effectively using traditional investigative techniques, and manipulating witnesses and informants, while also understanding and using technology to your advantage can only increase the level of success for the investigator. Taking a proactive approach to pursuing a fugitive and applying intense pressure will often force the fugitive into the open. The best investigators anticipate the fugitive's mistakes—the pursuer may make many mistakes, but the fugitive need only make one mistake to be caught. Therefore, the pursuer must always be ready to pounce.

1. "Who's Who in the Zoo"

According to Los Angeles US Marshals Task Force Commander, Chief Inspector John Clark, it is all about knowing "who's who in the zoo". The most important aspect in investigative work is identifying anybody and everybody who may be a potential source, analyzing the nature and depth of their relationships and their relationships with other

family members and business associates. Key tasks include locating and interviewing a spouse, children, significant others (current and past), parents and siblings, friends, business and criminal associates, neighbors, vendors and, most important, the fugitive's enemies. Capitalizing on weaknesses or character flaws of those in the 'zoo,' the investigator can pit one against another. Many times the spouse has no idea she is not the fugitive's only love. She may have much to disclose once she is told she is not the only one he slept with. The same can be said about business partners or criminal associates; often they are unaware the fugitive has fled or even committed a crime.

It is also important to adapt investigative techniques and approaches to circumstances, based on who is being interviewed or put under surveillance. Prior to interviewing a witness or informant, the questions need to be prepared and likely responses anticipated. Along with this it is critical to have counter-responses that can be supported with facts. Because it is possible to give more than they will get, investigators must be mindful to direct the questions and stay focused and on track. It helps to know the answers to as many questions as possible *before* they are asked. Once the interview is over, it is then vital to conduct surveillance on financial transactions, voice intercepts, and review physical tracking to identify responses to contact, and changes in patterns. Questioning witnesses and informants may require some aggressive behavior from the investigator. Investigators must be prepared to 'dirty'em up' if necessary to get the information needed to further the investigation. This includes checking to see whether there is an existing warrant for the fugitive's arrest which can lead to parole and probation searches and, if enough probable cause exists, then this could yield a search warrant which would enable the investigator to gather still more personal information.

2. Mistakes are Made

Both the pursuer and fugitive make mistakes. A common error for the investigator is to allow a pre-conceived theory about a case to dictate the direction of the investigation. Everyone has a tendency to allow cognitive biases creep into the way a problem is perceived instead of analyzing all the information and discounting none. For instance, because everyone has been saying for years that Usama bin Laden is in the Northwest Frontier Province (NWFP) of Pakistan, we ignore all other evidence suggesting anything different. Another mistake is to allow external actors like

informants, media, and other law enforcement agencies to dictate the direction of the investigation. Relying too much on intelligence that has been over-diluted or over-filtered by other investigators and analysts tends to lead the pursuer down the wrong path. It is imperative for the lead investigator to know all the details and behaviors of the fugitive, and to understand who's potentially involved in hiding and abetting the fugitive—who they are, and what they do in order to look for patterns and changes in *their* behavior. The investigator should never discount or overlook the obvious. An informant with the correct answer could be staring you in the face, even though he may not look the part, speak the language, or meet the criteria normally associated with knowing important things. Individuals like this represent the 'golden nuggets' that can change the entire direction of the pursuit.

Meanwhile, a persistent debilitating problem that exists in law enforcement at the federal and international levels is the lack of interagency coordination and limited sharing of information with investigators and enforcement personnel at the local and state levels. It is not always best to have a large force hunting one fugitive, but it is absolutely critical to have everyone aware that a fugitive *is* being pursued. For instance, if everyone knows who is being pursued then when the fugitive tries to rob a bank in South Africa, that fact should be transmitted to the investigator, which will hopefully lead to the fugitive's apprehension. Fugitives become cocky and over-confident, perhaps contacting someone they know, sharing their secret, or just becoming too comfortable or complacent. Fugitives will often commit another crime or get arrested, and once they are booked and their information is entered into the database and the prints match, then bingo, the cavalry can be called.

Being able to react immediately is essential to apprehending fugitives, because all too often these individuals are not prepared to move in short order, or someone may suddenly and unexpectedly blow their cover. Manhunting is a very time consuming, database-intensive, but simple process once someone is familiar with the steps. To do manhunting effectively requires dedicated individuals who are willing to sacrifice career progression and stick to the same job, year after year. Investigators must be able to work each investigation from cradle to grave, and if information and intelligence is mishandled be willing to restart the process.

V. DECEPTION AND THE FUGITIVE

Greek playwright Sophocles once stated, “Profit is sweet, even if it comes from deception” (as cited in Bartebly). Sophocles’ statement is quite applicable to the fugitive’s situation since the fugitive will seek to enrich himself by using deception as much as possible to avoid capture. Given this point, how does the United States military counter or at least minimize the effects of a fugitive’s deceptions, which he uses to stay hidden? The answer to this deception challenge is not easily found. In fact, leading intelligence analysts still struggle to solve *conventional* military deceptions that involve large numbers of troops, hard-to-hide platforms, and established governments. Bearing this in mind, in this chapter we seek to simply orient analysts to a PONI’s possible deception operation in order to point out how this can complicate finding and apprehending such individuals.

A. DECEPTION DEFINED

A variety of meanings come to mind when someone mentions the word “deception”—ranging from extramarital affairs to poker games—but the area of interest for the military intelligence professional today is the use of deception by non-state actors. To gain a workable definition, one can start with the U.S. definition of military deception. U.S. Joint Publication 3-58 Joint Doctrine for Military Deception defines it as: “Those actions executed to deliberately mislead adversary military decision makers as to friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission” (Joint Doctrine, 1996, p I-1).

Although this definition is a good starting point, it needs to be further expanded since it does not take into account non-state actors such as fugitives and their targets of operations. With this in mind, a better definition would also refer to those actions conducted by non-state actors that not only mislead their adversary’s military decision makers but also any component of the adversary’s government that might be responsible for developing and executing policies against the non-state actors’ group. Expanding the definition in this way would also capture the unique characteristics of dealing with transnational PONIs.

B. THE BASIC PARTS OF A DECEPTION OPERATION

Having settled on a working definition of deception that can be applied to international fugitives, let us now review the main parts of a deception operation and their importance. In our view, a fugitive's deception operation has five main components: objective, deceiver, target, story, and means (Gerwehr & Glenn, 2000, p. 28). One should approach these parts in the order they are listed since the order also amounts to a general roadmap for how deception operations are formed and carried out. The objective is the end goal, while the other four components determine whether or not the objective will be achieved. At the same time, it is critical to approach these components from the point of view that the fugitive is an international PONI. This means that conventional definitions, such as those found in U.S. military publications, can serve as starting points, but will require further elaboration and refinement on a case by case basis.

1. Objective

U.S. Joint Publication 3-58 defines the objective of deception as, "The desired result of a deception operation expressed in terms of what the adversary is to do or not to do at the critical time and/or location" (Joint Doctrine, 1996, p A-1). The key here is to remember that the PONI's deception objective is designed to get the hunter to act in a certain way to support a greater mission objective. In the case of al-Qaeda, the overall mission objective is the eradication of infidels in order to return Muslim lands to their true Islamic roots, as intended by Mohammed. al-Qaeda operatives change their appearance, mask their activities, and camouflage their operational bases in order to deceive the United States and non-Muslim countries so that they can achieve their goals. Additionally, their deception objective sets the stage for planning and executing the rest of their deception operation.

2. Deceiver

A fugitive deceiver is someone who alters or directs the altering of information received by the hunter so that the hunter makes decisions that favor the fugitive. Specifically, the fugitive deceiver conducts actions via means which allow him to 'tell the story' to the hunter. Ultimately, this helps him achieve his deception objective. On the larger scale, deception acts as a force enhancer allowing the fugitive deceiver to gain an

advantage over the hunter. Taken a step further, fugitives and their networks can deceive from the tactical to the strategic level. Therefore, deceivers can be found anywhere and, since they are non-state actors, they are not constrained to military venues when conducting their deception operation (Gerwehr & Glenn, 2000, p 22). This requires that intelligence analysts take into consideration other religious, political, economic or tribal figures and organizations which lie beyond the military realm that may be supporting non-state actors.

3. Deceiver's Target

U.S. Joint Publication 3-58 Joint Doctrine for Military Deception defines the deception target as, "The adversary decision maker with the authority to make the decision that will achieve the deception objective" (Joint Doctrine, 1996, p A-1). This definition, too, needs to be expanded beyond the military, to include other government entities such as the Departments of State and Treasury which play important roles in policy formulation. Non-state actors such as al-Qaeda target individual and multiple government entities simultaneously to create an overall veil of deception for both operational and support activities. Furthermore, analysts need to understand that collection assets and analytic organizations are not the targets per se, but rather are among the means by which the deception operations are executed against decision makers.

4. Deception Story

U.S. Joint Publication 3-58 Joint Doctrine for Military Deception defines the deception story as, "A scenario that outlines the friendly actions that will be portrayed to cause the deception target to adopt the desired perception" (Joint Doctrine, 1996, p A-2). Specifically, the deception story is the plan which the fugitive deceiver uses to manipulate the hunter to his advantage. Moreover, the story must be believable, verifiable, consistent, and executable. To meet these criteria, deceivers in general, and fugitives in particular, will prey upon the hunter's inherent perceptions and knowledge about them. These biases will be covered in greater depth below.

5. Means

U.S. military doctrine defines the means of deception as, "The methods, resources, and techniques that can be used to convey information to the deception target"

(Joint Doctrine, 1996, p A-2). These methods can be viewed using two different lenses: form and function. In terms of form, means can be separated into physical, technical, and administrative categories. In the fugitive's case, the same person or an ambiguous group of loosely connected people can orchestrate the means. Resources ranging from media outlets and websites to religious institutions and non-governmental agencies can serve as conduits to transmit the fugitive's deception story.

The functional lens is a better way to describe the means of deception used by fugitive PONIs. In *The Art of Darkness,* Gerwehr and Glenn offer seven categories of functional deception, to include: camouflage and concealment, demonstration, decoy, mimicry, dazzling, disinformation, and conditioning (Gerwehr & Glenn, 2000, p. 28). These terms were originally applied to means of deception used in urban warfare; however, they can be modified to serve as a starting point for discussing PONIs' means of deception.

Camouflage and concealment refers to how a fugitive attempts to disappear using different types of objects. In the case of camouflage, the fugitive uses natural or man-made materials to blend into his surroundings. If evading in the forest, an individual may darken his face with mud or cover his body with pine boughs to blend in. These actions would correspond to the traditional sense of camouflage. Another approach to camouflage involves assuming the appearance of the local people. For instance, the PONI could camouflage himself by dressing as a Bedouin if he was in the Saudi desert or he could attempt to blend in at Singapore's international port by appearing as a longshoreman.

The idea of concealment involves the use of terrain to hide from observation (Gerwehr et al., 2000, p. 30). The fugitive could use traditional concepts of concealment, which involve physical terrain, and could thus hide in caves, mountains, or swamps. However, PONI concealment should also be expanded to include the social terrain. Areas and groups that contain similar political, ethnic, religious, or occupational *activities* could be used to shield the fugitive. For instance, the fugitive could hide in a neighborhood full of co-ethnics. Additionally, he could take cover by using religious institutions or non-governmental agencies to prevent hunters from seeing him.

The second means of fugitive deception involves demonstrations. This concept centers on activities designed to draw the attention of the hunter away from areas that are important to the fugitive. Specifically, demonstrations could come in the form of an attack in a neighboring province within the same country or announcement of the formation of a new terrorist organization in a nearby state. The aim would be to cause the hunter to shift focus at least temporarily to the new event, thereby costing him precious time and providing the fugitive greater liberty.

The third means of deception involves decoys or dummies. According to Gerwehr and Glenn, decoying is, "The placement of a natural or artificial construct away from a deceiver to portray an entity or object of significance to the target" (Gerwehr et al., 2000, p. 30). How would decoying work in the case of PONIs? State leaders, for instance, routinely use body doubles or ringers. False trails can be created through the use of imposters. Decoys can also engage in scripted cell phone or email conservations designed to give the hunter the impression that the PONI is in one place when he really is not. The fugitive's network might also create a mock hide-out. A 'safe house' with fresh food, new clothes, and recent newspapers which fit the fugitive's profile would be established so that when the hunter gains access to it, he thinks that the fugitive is nearby.

The fourth means of functional deception involves mimicry: the fugitive uses an existing entity or creates one which is of significant interest to the hunter. For example, the traditional military application of mimicry involves the use of heat and noise generators to create the illusion that a large formation of tanks is approaching. This gains the hunter's attention, and he either avoids the tanks or requests additional resources to investigate and/or attack them. A PONI could create an image that implies he is more powerful than originally thought. He could create the impression that he has the full support of a country's government, or that the entire population backs him, and thus any attempt to capture him may not be worth the resources spent or the political backlash. On the other hand, the fugitive could make himself appear to be a much smaller target than he is. He could do this by portraying himself as being low on the totem pole or possessing a "clean" record in comparison to other members of his network or group. The hunter may then be led to believe that the fugitive isn't worth pursuing, especially when other, higher profile PONIs remain at large.

The fifth means of deception involves dazzling or sensory saturation: the hunter is so overwhelmed by so much "noise" that the PONI becomes lost in the clutter (Gerwehr et al., 2000, p. 31). The PONI, for instance, could create and release multiple false sightings and reports of sightings, and thus overwhelm the hunter's ability to track everything at once. This could be done in a couple of ways. First, the fugitive could create multiple, viable indicators that indicate he is located on several different continents simultaneously. Another approach could center on ensuring that multiple leads of equivalent importance coming from a wide variety of reliable sources all appear at once. Some might involve the fugitive himself while others might represent new and higher priority targets. This would put the hunter in the position of trying to decide what is most important while precious resources are consumed validating the intelligence reports.

The sixth means of deception involves disinformation. As in the case of conventional state-on-state deception, the fugitive has multiple ways to convey altered information about himself via the media. Newspapers, televisions news reports, and radio broadcasts, as well as websites, emails, and web-logs could be used to shape the hunter's response. Reports and updates concerning the fugitive's current location, health, or popular support could affect the hunter's strategy. Again, this would force the hunter to vet his sources, consuming valuable resources in the process.

The seventh means of deception centers on the act of conditioning. Gerwher and Glenn point out that conditioning involves "generating and then exploiting a bias, belief, or habit" (Gerwehr et al., 2000, p. 31). How does a PONI manage this? If, for instance, the hunter relies on sophisticated technology and large organizations to conduct surveillance and track the PONI's movements, the PONI can conduct routine activities that are easily collected against. Over time, the surveillance operators will become accustomed to "seeing" the PONI, but they will not realize that the PONI is actually exploiting their technological biases. Thus, the hunter will feel comfortable with the intelligence he is gathering even though the PONI is actually conducting operations elsewhere. This is yet another reason the hunter will need to be self-reflective, so as to carefully determine which of his biases and habits are readily available for exploitation by the fugitive.

C. ORIENTATION

Orientation requires that the hunter understand the enemy and himself in order to begin to identify and possibly overcome the PONI's deception. The hunter must not only try to understand as much as possible about the PONI, but also how that PONI sees the organization that is hunting him. This is where *framing the problem* is essential since this will establish boundaries that guide the hunter's efforts. This also is directly in line with Paul Rosa's reasoning that, "Among the most useful types of characterizations of data is information pertaining to the potential perpetrator of a D&D operation. The motives, proclivities, objectives, knowledge (including feedback mechanisms), and D&D tools, for example, of a potential D&D perpetrator may be consistent or inconsistent with manipulation of a specific item of information or source" (Rosa, 2002). In other words, only with a good understanding of the particular fugitive can the analyst or hunter focus his time and resources effectively.

1. Nature of the PONI and His Organization

Analysts and hunters should identify the type of PONI they are hunting by asking a variety of questions. For instance, is the PONI acting as an individual or is he a member of a group? If he belongs to a group, is this group sponsored by a state or a non-state entity? Additionally, what best describes the nature of the group: is it local, national, or transnational in scope? Each one of these questions will enable hunters and analysts to better appreciate the type of PONI they are pursuing. They can then explore past cases for information about how similar PONIs conducted deception operations, and the strengths and weaknesses of those efforts.

2. PONI's Denial and Deception Resources

Hunters and analysts must obtain as much knowledge as possible concerning the resources a PONI has at his disposal for creating and conducting denial and deception operations since these means will directly influence the complexity of his operations. By being aware of the level of complexity a PONI may achieve, the hunter can better allocate his collection resources. Attention should be focused on several areas, to include: logistics, personnel, finances, skill sets, and external assistance/connections.

When looking at these sectors, each should be considered independently, and then in concert since how these capabilities are combined can create new synergies for the fugitive.

3. PONI's Denial and Deception History

By analyzing a PONI's historical uses of deception, hunters and analysts can recognize and explore possible patterns. These patterns should suggest to the hunter possible areas to be exploited to help reveal the PONI's position. Specifically, if the PONI relied on certain resources such as key personnel or large amounts of money to conduct previous deceptions, then these factors can serve as starting points for collection. Remembering that all denial and deception activities are unnatural in nature, there should always be some residual evidence that can be examined. Specifically, the analyst should focus on support details, strategies, and cross-cultural knowledge the PONI may have used to advantage in the past. If the operation failed, the analyst should pay particular attention to the failure points and the conditions that created them. If a PONI has no history of deception activities, his background and motives can be compared to known deception cases to see how PONIs in similar situations, hailing from similar backgrounds, behaved, and thus suggesting clues.

4. PONI's Culture

The PONI's culture plays an important role since it will influence how he interacts with his hunter. Certain cultures may increase or reduce the constraints faced by the PONI and how those constraints can be handled. Analysts must be aware of the cultural factor as they develop the portrait of the PONI. *In The Mind's Eye*, Daniel Druckman and Robert Bjork highlight this by pointing out that, "By properly refining and adapting their methods, information can be gathered on how individuals from various cultures and subcultures conceive of deception and lying. In turn, this information might lead to determining what sorts of stories or actions constitute socially unacceptable behaviors." (1991)

Furthermore, the concept of culture should not be limited to just racial, religious, or social groupings; rather, it should be expanded to include corporate, governmental, and familial groups as well. Questions concerning who the PONI works for, what family he comes from, where he grew up, and the nature of his government should be raised. Then,

the answers to these questions should be examined in the context of how these external players view denial and deception. Also, by better understanding the PONI's background, analysts should have greater insight into the PONI's likely intent. Specifically, the analyst should explore the concept of whether or not, to what extent, and in what areas denial and deception aligns with the PONI's cultural morals, mores, and values. Finally, it should be noted that although culture is an important factor, it should not become the only factor considered when constructing the background of the PONI.

5. PONI's Knowledge of His Deception Target

Another key area that must be examined involves how the PONI and his fellow-deceivers view the hunter. Hunters and analysts must look at themselves as much as they look at the PONI. This is critical since the enemy has a choice to make about how he conducts his denial and deception operations. In particular, he can control the observables the hunter sees or he can control the hunter's focus. Since the PONI has a limited amount of resources he can devote to fooling the target, it is to his advantage to control the hunter's focus rather than to control all of the observables. In the end, the PONI will most likely use a mix of the two strategies. Thus, the best way to reduce the success rate of a PONI's denial and deception operation is for the hunter to understand his own biases, intelligence system, and decision-making process, and how the PONI is likely to try to manipulate these to his advantage.

a. Biases

Self-induced biases cloud people's judgment by preventing them from viewing an adversary's intentions and actions for what they are rather than what they expect them to be. In some cases, the hunter wants to see the fugitive as a lesser person or coward who lacks the skill and ability to deceive. Such a perspective automatically creates the false impression that the enemy is not worthy or capable of executing sophisticated operations in general, and deception in particular. Ephraim Kam, the author of *Surprise Attack*, drives home this point by stating, "…The belief in military superiority has an especially distorting effect when it relies on the concept that the other side has deep-rooted, permanent deficiencies" (1988, p. 80). When the analyst believes something similar, he opens himself to deception operations by his adversary.

At the same time, one's values can induce a form of self-bias. Each culture is distinct in the way its members view the world and in what they place value. Certain principles are accepted at face value while others are considered to be mutable rather than hard and fast rules. For instance, Americans tend to take the word of others at face value whereas elsewhere (e.g. in Arab societies) what is said is not necessarily what is meant, and everyone realizes this. Additionally, things like pride, greed, fear, or curiosity can be exploited by the PONI to create a sense of comfort for the hunter, particularly when these are known to be things that motivate the hunter. The more the PONI knows about the hunter and the less the hunter recognizes about him, the more the PONI can take advantage of cross-cultural differences to further his deception.

Cognitive biases create problems for intelligence analysts by hampering their ability to accurately comprehend incoming information. What are these biases exactly? According to Heuer, cognitive biases are:

> Mental errors caused by our simplified information processing strategies. It is important to distinguish cognitive biases from other forms of bias, such as cultural bias, organizational bias, or bias that results from one's own self-interest. In other words, a cognitive bias does not result from any emotional or intellectual predisposition toward a certain judgment, but rather from subconscious mental procedures for processing information. A cognitive bias is a mental error that is consistent and predictable (Heuer, 1999, Chp 9).

There are a variety of contributing factors that feed cognitive biases, such as relying on word of mouth over statistical data or willingness to believe discredited evidence. These impact experts and novices alike and are not limited by one's profession or experience level (Heuer, 1999). Given this reality, a PONI engaged in deception will look to take advantage of these weaknesses, and thus will try to create an image that the hunter's mind by itself cannot distinguish from reality. While this bias is difficult to overcome, even when recognized by the hunter, the first step in minimizing its effects is to recognize that it exists.

b. Intelligence and the Decision Making Process

Another area that needs addressing involves how the targets of denial and deception acquire and then make decisions based upon the information they receive. Hunters and analysts should develop a working knowledge of the systems and procedures

used to collect intelligence against the PONI and his associated organization. Efforts should focus on the collection patterns of platforms, ranging from spies in the field to orbiting satellites. Special care should be taken not to forget open sources such as foreign newspapers, diplomats, and television reports. These sources of information are of particular importance since they provide the PONI with means for conveying the deception story and monitoring the hunter's reactions. Roy Godson and James Wirtz drive home this point when they say, "Deception requires information channels to reach the adversary… Deception planners require the authority and imagination to exploit traditional channels and develop new ones on an adhoc basis." (Godson and Wirtz, 2002)

Not only does the PONI engaging in deception look for ways to inject and receive information, he is also interested in how analysis and decision-making is conducted by his hunter. Specifically, he wants to understand how the hunter assesses received information and then how the hunter decides to act. Hunters should consider how their organization collects, validates, sorts, analyzes, and then presents information to the action arm of the government. Based upon this information, hunters should ask how and at what level decisions are made,, and how these decisions become publicly known.

c. PONI's Strategies for Denial and Deception

Hunters should examine the possible denial and deception strategies that a PONI can pursue to keep himself hidden. Strategies result from the interaction of factors, such as the PONI's nature, culture, resources, activities, and history, with the capabilities and nature of the deception target. Although there are a variety of ways to categorize a PONI's deception strategies, our approach is based on the deception sophistication levels described by Gerwehr and Glenn in *Unweaving the Web*. These levels are: static, dynamic, adaptive, and premeditative (Gerwehr and Glenn, 2002, pp. 33-34).

A static strategy would be the simplest deception scheme: a PONI's operations would remain the same even though other factors, such as the hunters, resources, or outside stimuli have changed. With a dynamic strategy, one would expect to see a deception plan that would be triggered only under certain conditions. Although a trigger would be required, the actual activities once initiated would always remain the same. An adaptive strategy would build on the dynamic strategy by accounting for

changes in both the stimuli and the activities carried out in response to them. Finally, the premeditative approach is the most advanced since it would take into account multiple factors ranging from the hunter's nature and capabilities to the PONI's own history and capabilities. This strategy would be aimed specifically at one particular hunter.

By examining the strategies available to PONIs, one can begin to define the time and space restrictions on his deception operations. In turn, identifying parameters should help the analyst to restrict the amount of information that he will have to review.

VI. A MANHUNTING METHOD

Understanding the fugitive's strategy to avoid capture creates the foundation for understanding his decision-making process. The fugitive's decisions are based on four apprehension avoidance criteria: familiarity, survivability, safety, and vulnerability. When the fugitive asks, "Where do I go to hide?" these four criteria help to frame his choices. Familiarity, the first criterion, refers to the level of comfort or intimacy a fugitive feels when he is in a particular geographical area. This familiarity can be based on prior visits to a location, close associates who live in an area, or a shared ethno-linguistic identity. The premise here is that every individual has a cognitive bias toward "comfort zones." For instance, a person who has spent his entire life in an urban area may find it difficult to live in a jungle because he has not developed the necessary skills to operate effectively in that environment. This cognitive bias may or may not be cultural; a cultural bias is one by which an individual interprets information according to his cultural orientation.

We believe fugitives may well suffer from what we call "location familiarity effect." Location familiarity effect is similar in concept to another popular cognitive bias, mere exposure effect. **"**Mere exposure effect is a psychological artifact well known to advertisers: people express undue liking for things merely because they are familiar with them" (wikipedia, 2005). Therefore, location familiarity effect would predict that fugitives will prefer to hide in locations with which they are familiar. When a PONI makes a decision about where to go, his decision is limited by his experiences, to include the sum of the locations he has visited.

Yet, how does a PONI know whether he will be safe or have the necessary life support to survive? Again, the location familiarity effect likely plays an important role. Generally speaking, the fugitive should choose locations where he already knows or feels he can survive and be safe. When a fugitive goes to a location where he has limited to no knowledge, then his level of uncertainty is bound to be high. As the fugitive's level of uncertainty increases so, too, does the level of risk that he must be willing to accept. If he goes to a location about which he has limited knowledge, his level of uncertainty is

higher, and hence his level of risk will also be higher. Although different individuals have varying degrees of risk tolerance, a fugitive should always try to minimize his uncertainty ergo the location familiarity effect.

Essentially, a PONI's mental map constrains his potential hiding locations. These constraints or cognitive biases are greatly influenced by the number and varying types of places he has previously visited. On rare occasions, certain fugitives are able to disassociate themselves from their previous life. However, this takes a tremendous psychological toll on the fugitive. Few fugitives are able to break all contacts from their previous life because of the immense psychological strain. For example, when Eric Rudolph was finally apprehended after five years on the run, Rudolph was very cooperative with local law enforcement—not something you would expect from such a notorious fugitive. According to Kathleen Walls, the author of *Man Hunt: The Eric Rudolph Story*, "The jail administrator, Joe Morris, was surprised at the prisoner's good manners" (Walls, 2003, p 77). A possible reason why Rudolph was so well behaved could have to do with his psychological state and the impact severing his social ties had; this may well have weakened his resolve. It is important to note that severing social ties is difficult for most fugitives. Even if only limited, most fugitives tend to maintain some type of contact with members of their social network. So long as fugitives are unwilling to depart from their previous relationships and normative behaviors their cognitive biases will help delimit their decisions.

In addition, a fugitive's decisions are also restricted by a survivability criterion. Survivability is the ability of a fugitive to operate and live in a certain geographical space. For instance, a fugitive must have food, water, medical supplies, and shelter to survive. Without these basic necessities, a fugitive will be forced to move to another location to fulfill these basic survival requirements. However, survivability expands past simple life support when we consider fugitives who belong to organizations—members of terrorist groups, drug cartels, gangs, and mafias who attempt to avoid capture and prosecution while maintaining a link to the organization. Organizational fugitives require, and can acquire, other types of support. For instance, organizational fugitives need a means to communicate and coordinate activities, transportation to conduct business, personnel and equipment to support operations, and a financial infrastructure

for requisitions. In other words, both Type-A and Type-B PONIs tend to access support networks to receive different types and degrees of support. Consequently, Type A and B PONIs will not choose locations where they cannot live and operate.

Support networks not only provide physical goods, but can also provide early warning and physical security. Security is another term used to describe safety, which is the condition of being free from danger or risk. For the fugitive, safety includes the degree or likelihood of apprehension avoidance. What helps to mitigate high levels of risk is the support of a trusted network that provides the PONI with protection. The trust network is comprised of individuals who reside inside the individual's larger support network. A trust network is composed of those individuals who have intimate knowledge of the PONI's exact location and provide him with the necessary safety to avoid being captured. Generally speaking, a fugitive is more likely to trust an individual with whom he has long-standing ties, which have been tested in moments of danger, and/or ties with a considerable moral component. If the fugitive's trust network is neutralized then the fugitive's ability to evade decreases significantly. For instance, as Saddam Hussein's trusted associates were apprehended, Saddam's trust network began to dissolve, which forced Saddam to rent protection (Moore, 2004, pp 237-257). By identifying a PONI's trust network the investigator or intelligence analyst can potentially correlate individuals to locations, which can potentially reveal the fugitive's hiding location.

The final criterion is vulnerability. Vulnerability is slightly different from safety in that safety is a condition provided by a trust network, whereas vulnerability is more a measure of the hunter's access—a subject discussed in a previous chapter. Some fugitives gravitate toward areas where they don't feel vulnerable to capture. They may not have a robust support or trust network, but the lack of accessibility by the hunter ensures their freedom. Vulnerability, basically, is dictated by where the hunter operates. Certain legal and political constraints limit the physical space where the hunter can look for the fugitive. These constraints limit the time, location, and manner of a search. Furthermore, vulnerability can be geographically represented on a map. While vulnerability may seem easy for a hunter to map because the hunter has perfect knowledge of where and how he operates, the hunter must try to map *the fugitive's assumptions* about the hunter's locations and methods. That is, the hunter must make

estimations based on the level of information he believes the fugitive has on his (the hunter's) capabilities and accessibility.

A. A MANHUNTING PROCESS

The four criteria mentioned above are the product of a five step manhunting process, which is represented in the input-output model in Figure 6 below. The five steps of the manhunting process are: 1) conduct an initial background investigation via research; 2) build a social profile; 3) identify the support network; 4) analyze the hunter's constraints and limitations; 5) and conduct analysis of competing hypotheses. This manhunting process is iterative and structures the problem so as to remove certain biases from the search operation. This analytical process provides better resolution as to the fugitive's possible locations by limiting pre-established beliefs about the fugitive's behavior or hiding location.

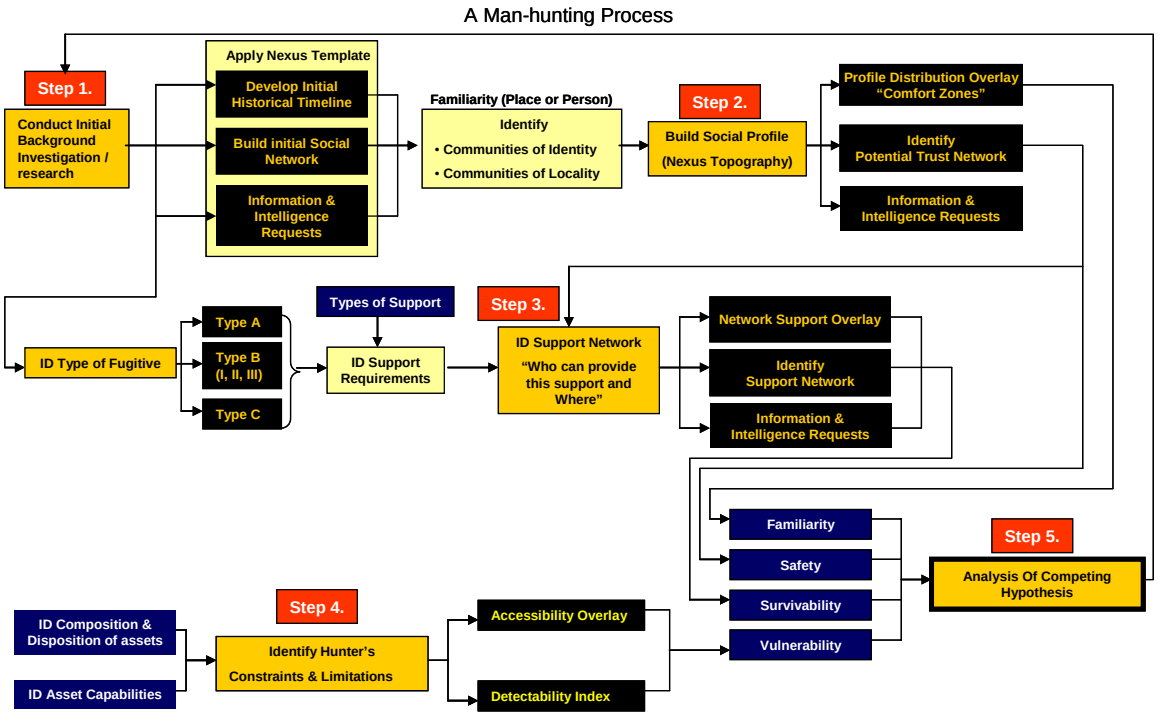

Figure 6. A Manhunting Process

Step One, the initial background investigation, enables the analyst or investigator to identify facts and assumptions about the fugitive. During the initial investigation, the analyst develops a historical time-line listing dates and locations where the fugitive has been. During this step, the analyst also builds an initial social network to include a family tree of the fugitive, and a list of classmates. Certain assumptions can be made

about the fugitive, but these assumptions will need to be verified. Step One concludes with developing an information request list to solicit information missing from the initial investigation.

Step Two then develops the fugitive's identity by asking the question: who is he? What are his 'communities of interest' and 'communities of locality'? 'Communities of interest' include affiliations based on hobbies, skills, and interests, while 'communities of locality' define the fugitive according to where he is from or where he has lived. These communities can be represented on a map as a social profile distribution overlay. Mapping these communities can also suggest other areas to search for more information about a fugitive's potential social network(s).

Identifying the support network is the third step in the manhunting process. Step Three considers the different types of PONIs—e.g. Type-A (individual), Type-B (organizational), or Type-C (deposed state leaders). Each PONI type will require different forms of support to survive, conduct operations, and avoid capture. After identifying the various support requirements, the analyst can identify specific individuals from the fugitive's social network who are likely to fulfill the fugitive's support requirements.

The fourth step in the process requires the hunter to analyze his own capabilities and leads to the development of an accessibility overlay and detection index. The accessibility overlay graphically represents the hunter's area of operations, and the detection index identifies what the hunter can observe. The detection index examines different types of intelligence collection platforms and identifies what the hunter can or cannot detect with those collection assets. This analysis provides a better framework for understanding how a fugitive could operate in a given region without being detected. By analyzing both the accessibility and the hunter's ability to detect fugitive-related activities, the analyst can determine where the fugitive is most vulnerable to capture and, conversely, the PONI's optimal hiding location.

The final step is to take the objective analysis and apply a subjective set of metrics to identify the most likely areas where the fugitive will hide. By using a technique called the 'analysis of competing hypotheses', described in Richard Heuer's

book, *The Psychology of Intelligence Analysis* (1999), the intelligence analyst can greatly reduce certain cognitive biases that he may have when trying to determine the fugitive's potential hiding location. Once given a list of these locations, the commander can then direct assets to search for the PONI and collect critical information. Once the information collection is complete, we have cycled through the first iteration of the five-step process. If the individual is located then the necessary apprehension operation can be initiated. If not, additional iterations should be conducted until the individual is found.

However, we would be remiss if we did not acknowledge two fundamental problems associated with this five-step process. First, this manhunting process has never been validated against a case study or real world scenario. Unfortunately, limited academic research currently exists, and any information that is available only draws from bounty hunting and skip tracing. Most of the pertinent details behind successful and unsuccessful U.S. government efforts remain classified. Due to the lack of information available on the subject, validating this process may prove difficult until it has actually been tested in the field.

Second, there is no standardized metric to measure or compare processes. The current manhunting metric compares numbers of apprehensions to numbers of outstanding warrants. The USG's success rate in finding and apprehending fugitives is sporadic, to say the least. For every fugitive who has been arrested, there is an example of an individual who has avoided capture—Usama bin Laden's elusiveness is a case in point. Since no formalized manhunting process exits in the U.S. military, the process we propose can at least serve as starting point. It will certainly help standardize practices if nothing else.

VII. NEXUS TOPOGRAPHY

For the last 10 years, the U.S. intelligence agencies have conducted covert operations to capture Usama bin Laden (UBL). Intelligence analysts carefully review incoming intelligence messages for clues that could reveal the location of the world's most infamous fugitive. These analysts conduct detailed Social Network Analysis (SNA) based on available classified information and closely analyze messages to determine who is talking to whom, the time of the conversation, and what is discussed. This information is used to gain additional insights into the al-Qaeda terrorist network's structure. The hope is that analysis of known or suspected terrorist links will reveal an informal hierarchy, enabling the targeting of key personnel in the network, which could disrupt current and future al-Qaeda operations. Unfortunately, this approach has not led to Usama bin Laden's capture.

With that in mind, this chapter will first examine the intelligence community's current framework and identify any shortcomings in the intelligence analysts' methodology. Second, taking into account the reality of incomplete information, this chapter will attempt to improve on current methods by presenting an alternative methodology, which integrates a model and an investigative process for mapping a fugitive's network. We call this Nexus Topography (NT). Finally, this chapter will describe the benefits Nexus Topography offers the intelligence community when hunting fugitives.

A. CURRENT FRAMEWORK

The first step in understanding why a new methodology is needed involves an understanding of how the US counter-terrorism community currently maps fugitive networks and the problems with that method. Since the September 11th attacks, the US intelligence counter-terrorism community has shown a great deal of interest in the applications of Social Network Analysis for tracking and targeting terrorists. Managers within the intelligence community have aggressively sought out experts and developed software tools to conduct Social Network Analysis, while at the same time instructing their subordinates to build large databases of information to analyze.

Since the effort to capture terrorists became such an urgent task post-9/11, it appears that either the general concept of how to build the framework was not sufficiently developed or the concept was not communicated to those analysts at the lower levels who are responsible for doing the actual work. Regardless, this approach has created a de facto system for reconstructing a terrorist's network based on the supposition of conventional, hierarchically structured force designed to fight in post-World War II Europe. That is, this approach creates an organizational chart based on a pre-determined template. Given this outdated approach, analysts construct and implement message filters that seek out specific information from intelligence messages to create a picture of the enemy and his organization. This system usually involves taking incoming classified message traffic and filtering out clues as to which individuals are subordinate to whom and how the organization interacts operationally.

B. FRAMEWORK AND METHODOLOGY SHORTCOMINGS

Although intelligence analysts are attempting to capture all the information about a fugitive, they are coming up short for four reasons. First, the system used by intelligence analysts is rooted in a cold war mentality, which lacks the flexibility for dealing with the current asymmetric and dynamic nature of terrorists (Fellman & Wright, p. 5). Terrorists generally operate in cellular networks, which are more likely to be flat horizontal rather then vertical organizations (Baraba`si, 2003, p. 223). Horizontal structures negate the value of looking for specific chains of command, which are either not present or ambiguous in nature. Also, horizontal structures grant the fugitive a greater degree of flexibility in interacting with other collaborators. Specifically, the fugitive will interact with those individuals who can help him with a particular problem. Therefore, the fugitive's decisions are contextually based upon his needs at a given time, place, and under circumstances which prevent him from following traditional hierarchal patterns like those used by standard military commands. Since these patterns are irregular, they are not likely to be captured by a hierarchical construct.

Second, analysts often ignore open source information. The bias towards classified information likely stems from the days when the little information known about the Soviet Union was collected through official government assets. As a result, analysts depended on classified intelligence collection assets to fulfill almost all information

requirements. However, analysts can now access a great deal of information about PONIs from on-line sources such as websites, blogs, and chat rooms. Furthermore, journalists can provide useful information because journalists have greater access to a broad rand of different individuals, groups, and organizations, man of whom use the media to spread propaganda. Unfortunately, most analysts continue to ignore open sources for information on fugitives.

Third, the current fugitive framework only concentrates on the operational network and does not capture the fugitive's *entire* social network, built over the course of his lifetime. In particular, the system considers those elements critical to the fugitive's operational involvement within the organization. Given this situation, a large amount of information is typically missing on the fugitive's religious, educational, political, military, criminal, and economic associations. In *Dark Networks: The Structure, Operation, and Performance of International Drug, Terror, and Arms Trafficking Networks,* Brinton Milward and Joerg Raab highlight this point for al-Qaeda, stating "Unlike the drug smuggling networks, the membership of al-Qaeda seems to be quite diverse in terms of ethnic, national, and social background. Operatives are from a variety of countries, born Muslims and converts, highly educated men from middle class or upper class families to petty criminals with only limited education" (Milward & Raab, p. 10). Given these wide-ranging differences, the current system fails to capture the complex nature of these relationships.

Additionally, the current framework primarily concentrates on operational ties between fugitives and fails to provide any historical context for these relationships. In *Uncloaking Terrorist Networks,* Valdis Krebs, drives home the importance of earlier relationships stating, "Conspirators don't form many ties outside of their immediate cluster and often minimize the activation of existing ties inside the network. Strong ties between prior contacts, which were frequently formed years ago in school and training camps, keep the cells linked. Yet, unlike normal social networks, these strong ties remain mostly dormant and therefore hidden to outsiders" (Krebs, 2002). Therefore, analysts have no way of knowing if the fugitive has developed strong relationships through his past activities since these bonds do not appear in recent intelligence reports. As mentioned before, the horizontal structure of terrorist networks allows fugitives to

activate latent relationships, which baffles intelligence analysts and prevents collection assets from identifying additional associates.

Fourth, Social Network Analysis (SNA) suffers from an inherent flaw due to a reliance on complete information. Specifically, traditional SNA relies on an a priori knowledge of relationships, but without complete information Social Network Analysis is limited in its effectiveness. Additionally, most fugitives who are members of transnational criminal groups—like terrorist organizations, drug traffickers, and illegal arms dealers—operate in an opaque environment. Their clandestine network's cellular structure is developed to prevent information from being gathered on the organization. As a result, any type of useful analysis must be conducted with incomplete information.

Consequently, intelligence analysts need a map to identify areas of missing information, which will enable US intelligence analysts to construct a more complete picture of the fugitive's support network. The key to developing such a map requires an integrated framework, process, and methodology specifically designed to identify *missing information*, something we label Nexus Topography.

C. NEXUS TOPOGRAPHY

While Social Network Analysis documents the connections or links in a social group, Nexus Topography describes the universe of potential relationships in different social environments and cultures. The word "nexus" comes from the Latin word "nectere," which means to bind. So, Nexus Topography maps social forums or environments that bind people together. The advantage of Nexus Topography is that it facilitates identification of *missing* information, which further allows intelligence analysts to redirect collection assets.

In developing a picture of a PONI's clandestine social network one must move from the known to the unknown. In the development of a social network there are two constants: all social interactions occur at a specified place and at a specified time. If two individuals never occupy the same time and space, they are not likely to develop a direct link. Conversely, the likelihood of an interaction occurring increases if two individuals do occupy the same time and space, referred to from here on as spatial coincidence. The exception to spatial coincidence involves the ability to create virtual relationships over

the Internet in places such as chat rooms (something beyond the scope of this thesis). Therefore, the primary focus of NT is to show when, where, why, and how relationships are formed. NT's aim is to understand the intricacies of relationship development to forecast the PONI's *complete* social network.

1. Relationship Development

A short discussion about where relationships are developed is necessary before we can fully flush out Nexus Topography. The initial social environment where relationships are formed is in the family unit. The first bonds are those formed between parents and children, brothers and sisters, grandparents and grandchildren, cousins, and aunts and uncles. These family ties are often considered the strongest social bonds developed between people. In many cultures, generations of family members live together in the same household and maintain close ties. The next most common set of social interactions occurs between teachers, students, and classmates. These bonds can last for generations, but the social interaction itself occurs at specific schools and universities. Upon completion of academic study, most people transition straight into the market place, which is another common location where social interactions occur. Yet, another area where social interactions take place includes religion (i.e. churches, mosques, and temples). For instance, religious congregations normally have a set time and location where members meet to worship.

The social interactions mentioned above all occur within what we earlier referred to as communities of identity. There are two types of communities of identity important to the development of relationships: communities of locality and communities of interest. The community of locality is the district or geographic region in which people live, interact, or under which they are governed. An example of a community of locality is a neighborhood, village, city, town or province. Communities of interest, on the other hand, are communities formed around a common interest or shared experience. For example, prisoners or inmates, members of the military, scientists, sports enthusiasts, and hobbyists comprise of communities of interest. The underlying assertion is that relationships are always developed within communities, whether these are communities of locality or communities of interest. By examining a fugitive's communities of locality

and interest, an analyst can create the PONI's social profile. This profile can aide in mapping the PONI's affiliation network.

2. Diverse, Redundant, and Adaptive Relationships

At this time, it is important to introduce the concepts of diversity, redundancy, and adaptability. Diversity of identity refers to the fact that individuals often have multiple identities: a familial identity, an employment identity, a religious identity, and an academic identity. Each identity is different and helps define the individual's social network(s). Redundancy refers to individuals sharing multiple identities across networks. For instance, two individuals could attend the same church, graduate from the same university, and work in the same office building. In this case, these two individuals have a redundant relationship based upon multiple shared identities (location, religion, education, and employment). The byproduct of redundancy is that some links between sets of individuals may be disproportionately strong. Finally, relationships have the characteristic of changing over time. That is, a fugitive's social network may alter as the fugitive's interests change, he moves to another community, or his position within that community shifts. These changes directly influence the nature of his relationships, which will further affect his informal network. Diversity, redundancy, and adaptability are what make informal social networks, and especially clandestine terrorist networks, so powerful, and why military commanders have a hard time disabling these networks.

D. AFFILIATION NETWORKS AND LONGITUDINALANALYSIS

After reviewing the concepts of redundancy, diversity, and adaptability, it is now time to discuss affiliation networks and time analysis. In *Social Network Analysis: Methods and Applications*, Stanley Wasserman and Katherine Faust describe affiliation networks as "two-mode networks, consisting of a set of actors and a set of events" (1994, pp 291-298). Affiliation networks illustrate or map ties developed at events or activities. Such events could include sporting events, clubs, or religious meetings. These events may serve as a catalyst to unite two or more individuals into a group or clique. Unfortunately, affiliation networks are currently modeled according to traditional node and link diagrams. That is, the event serves as the central node and each individual is linked together through attendance at such an event. This type of static analysis has very limited uses in the analysis of clandestine networks.

One of the major problems with traditional network analysis is measuring and depicting time or longitudinal data. Unfortunately, most longitudinal analysis concentrates on how networks change and adapt over time, but rarely focuses on how networks are created. This type of analysis is also depicted in only two dimensions. As Wasserman and Faust state, "network analysis and network models have often been criticized for being static. Although much work has been done on longitudinal models, applications of this methodology are sorely lacking" (1994, p 730). However, time—and the timing of relationships—is extremely important in unraveling small world terrorist networks.

More useful is strand analysis. Traditional SNA graphically depicts nodes and links, but strands represent the life span of individuals. Strands are linked together by ties formed through various affiliations. Strand analysis is three dimensional analysis with individuals, time, and events each representing a different dimension in 3-D space. The advantage to strand analysis is that it depicts where potential social links can develop. Using both strand analysis and the NT template can effectively build a picture of the PONI's potential associates that were previously unobservable.

E. MAPPING THE NEXUS

Relationships develop inside specific regions or communities based on the concepts of identity and locality. These specific regions can be categorized and used to template a range of bonds, which should help analysts investigate key areas of possible interaction. These regions of nexus are religious, political, educational, criminal, military, familial, cultural, and economic. It is important to note that many of these overlap. For instance, Islamic fundamentalist groups use religion as a source of political power, economic exchange, *and* cultural identity.

1. Familial

To determine familial relationships, the analyst must identify paternal and maternal genealogy. This is especially important in tribal societies, where family lineage is extremely important, and analysts need to look for bonds or alliances created at the tribe, clan, lineage, and family levels. Social affiliations have so far received the most attention in network analyses. These affiliations include not only ties of friendship, but even more importantly, familial relations. The investigator must not only ask, "Who are

the fugitive's closest friends now, and who were his closest friends when he lived or worked in such-and-such a place?" but also, "What is the fugitive's family tree: is his matrilineal side more dominant than the patrilineal side? Do both sides of his family accept him? What about his wife's family (or wives' families)? What about siblings who might be married to people who show up as political or military associates? While records about this may be difficult to construct, birth, marriage, divorce, and death records are usually available in the public domain or can be obtained by persuading or coercing local administrators or even village elders. HUMINT collection, by the CIA, Defense HUMINT Service (DHS), or third country intelligence sharing can provide additional information in this arena.

2. Educational

Educational bonds are relationships developed during the sharing or exchange of knowledge. For instance, a PONI who attended a specific university at a certain time should have developed a social network at that university. Therefore, an intelligence analyst can develop a target list based on all the students and teachers who attended that university during that time. This does not mean that all individuals who attended that university are terrorists, but it does expand the fugitive's potential social network and may reveal important information on the network's infrastructure. Also, it is important to remember that education and how it is imparted to a person varies according to culture and socio-economic status. For instance, people who live in third world Islamic countries and who come from poor families are unlikely to attend government sponsored schools. In contrast, families are more likely to send their sons to madrassas to gain a rudimentary education. With this in mind, the analysts must understand and focus on the specific characteristics of the PONI's background so that they can gather relevant educational data for analysis.

3. Political

Political bonds are bonds based on the manifestation of social power in a society. Non-clandestine groups, organizations, and parties are formed to create power through numbers. This power is based on the ability to mobilize group members in support of an idea, belief, or cause. Political affiliations may often link a fugitive to a government official or to individuals who can mobilize popular support. To begin analysis of the

political nexus, an intelligence analyst must identify those direct and indirect relationships between the PONI and individuals who hold government positions, such as town or village council members. These associations can transcend the local level government and manifest themselves at the national level. The analyst should develop a list of political parties and politicians who hold ideological beliefs similar to those of the PONI and who may be indirectly linked to him through others.

Often, the line between politics and religion is blurred. This is particularly true when discussing Islamic fugitives since Islam recognizes no distinction between the two (Islamism is often described as political Islam) (Sick, 1993). The fugitive's affiliations can be found, again, in open sources such as propaganda pieces, party registration records, newspaper columns, and the records of political proceedings. It is vital to understand what organizations the fugitive has belonged to. For example, Usama bin Laden's affiliations with members of the Muslim Brotherhood, certain Salafi groups, and Wahabbi clerics all helped him expand his popular support base and lent him a certain level of political power within the Islamic world. Who a fugitive associated with, campaigned with, or sponsored legislation with can also be telling. Equally important is to pay attention to those persons whom the fugitive opposed or had caustic relations with.

4. Religious

Religious bonds are relationships developed inside a religion. Usually these relationships begin at the local church, mosque, or temple. Yet, religious bonds and affiliations can transcend national boundaries. Since religion is so frequently a source of identification (among those of like religion) and friction (among those of different religions), this category merits careful attention. For instance, knowing whether a PONI professes to be Muslim, Christian, Hindu, etc., is very important since he is less likely to find refuge among people of a different religion. Within the major religions it is important to distinguish whether the fugitive is loyal to a particular denomination such as being a Sunni, Shiite, or Sufi Islam. Within that denomination, knowing whether the PONI belongs to a sect, sub-sect, or splinter group with a particular ideology can be extremely helpful to an analyst.

5. Economic

Economic affiliations are the relationships created through economic exchange, such as business ventures or charitable organizations. One should build a list of businesses that are either funded by the fugitive or where the fugitive may find work. For example, if the fugitive is a carpenter, he will probably try to find work as a carpenter. Similarly, if a fugitive is a philanthropist and enjoys doing charity work for people, he will probably be affiliated with other individuals who does similar charity work. This makes it important to ask questions like: who has the fugitive been in partnership with, or been employed by, or has made significant or numerous transactions with?

Another critical component involves tracking the flow of money. In the case of al-Qaeda, the "Golden Chain" has become a common term to describe the network's financial supporters in the Middle East (Eurolegal, 2004). Again, open source reporting offers a tremendous amount. HUMINT can also yield valuable information, whether from interrogations of captured members of the fugitive's network or intelligence sharing among countries that have cooperative agreements in place. If the fugitive's network does business, or is associated with charitable organizations within the United States, tax records and legal documents can provide valuable information about a fugitive's connections.

6. Criminal

Criminal bonds are relationships formed within the prison system. When men serve time together in prison extremely close relationships may develop. Sometimes these bonds can be tighter than those in a family or tribe. With this in mind, analysts should ask questions, such as: was the fugitive incarcerated, where was he incarcerated, and when was he incarcerated? Additionally, are there any countries that have outstanding warrants for the fugitive's arrest? By developing a picture of the fugitive's criminal ties and history, one can map a network of people who the fugitive relies on or that he may feel indebted to, or vice versa.

7. Military

Military bonds are built through shared combat experiences or military training. It is easy to locate those who served in combat together, because there is usually a list of veterans that can be retrieved through databases or records. A tightly knit group is

developed through different military experiences with varying levels of commitment to each other based on those experiences. Past military affiliations, such as training received, special skills studied, or unit membership, can be used to suggest a fugitive's current relationships Discovering what campaigns a fugitive fought in (such as Afghanistan in the 1980s), and alongside whom, is useful information. This information is most likely to be found on propaganda websites, during interrogations, or perhaps in U.S. military or CIA archives that maintain databases on political and military leaders. This type of data can also be extracted from foreign government records or local knowledge.

8. Ethno-linguistic / Cultural

Ethno-linguistic and cultural bonds form because individuals share a common language or ethnic and cultural background. For example, if a fugitive only speaks Arabic then it would be difficult for him to have close ties to anyone who does not speak his native tongue. Not all ethno-linguistic and cultural ties are strong, but some are crucial to a person's cultural identity. In Afghanistan where tribal loyalties are fundamental, a Pashtun is far more likely to find refuge in Pashtun-dominated parts of the country rather than areas populated by Turkomen or Azeris. Similarly, if propaganda websites retelling the exploits of a PONI indicate that he, as a foreigner, established a lasting alliance with a warlord of a certain ethnicity, this information could prove critical in narrowing the field of investigation. The investigator must seek to understand the relative strength of such bonds. Books, reports by investigative journalists, and propaganda are useful open sources for such information.

F. STRENGTHS OF NEXUS TOPOGRAPHY (NT)

Although NT is a simple and straightforward concept, its strengths are multiplex. First, Nexus Topography identifies key social terrain—defined as social elements that tie individuals together—that can be used to narrow areas of investigation. Developing as complete a template as possible for a PONI's *potential* network should be invaluable given the high turnover rate in analysts and the constant effort of maintaining continuity in analysis. Additionally, NT can be used against a variety of PONIs, thereby providing analysts with a very flexible tool. It does not matter if a PONI is a member of a drug cartel, terrorist organization, or weapons smuggling outfit since the model provides a

standard approach that can be tailored to a specific individual or group simply by identifying how individuals are connected. A by-product of this model is the increased efficiency in collection, especially when collection resources are scarce. As mentioned before, the current framework tends to focus mostly on classified information since it deals with operational connections. But, Nexus regions can be researched in the open source realm even before classified collection begins. This, too, can serve to better focus limited collection assets or free up resources from other intelligence taskings.

VIII. ORGANIZATIONAL STRUCTURE AND PROCEDURE

Any type of analytical process needs systems and an organization to ensure that the inputs yield appropriate outputs. Without an organization that integrates systems, the best analytical processes will not achieve their desired outcome. Therefore, in this section we analyze and present a possible organizational structure to support the proposed manhunting process.

The fundamental question concerning manhunting is whether the United States government (USG) is properly organized to conduct manhunts? Currently, the USG has no central organization that oversees manhunting. Apprehending fugitives has never been a core competency of either the DOD or any of the intelligence agencies. Traditionally, apprehending individuals has been considered a law enforcement function. However, criminal cases are man-power intensive, so most criminal investigations focus on collecting evidence to issue arrest warrants. Furthermore, the suspects in most criminal cases are concerned not with running from justice, but with concealing their connection to the alleged crime. This dynamic has prevented the law enforcement community from developing a centralized organization responsible for all fugitive manhunts. Currently, the U.S. Marshals are tasked by the Attorney General to be the lead agency for conducting many of the USG's fugitive investigations, but not all. Due to the lack of a centralized oversight body, the United States government (USG) has not clearly defined the duties and responsibilities between various governmental agencies. Since manhunting is an important aspect in the war on terror, the USG has multiple agencies expanding their jurisdictions past traditional organizational roles. Meanwhile, what role should the Department of Defense play in hunting terrorists?

A. A MANHUNTING ORGANIZATIONAL STRUCTURE

Rumsfeld's War (Scarborough, 2004) contains a 1 July 2002 "snowflake" from Donald Rumsfeld to Doug Feith that addresses the issue of manhunting. In the snowflake Rumsfeld asks, "How do we organize the Department of Defense for manhunts? We are obviously not well organized at the present time" (Scarborough, 2004, p183). One difficulty DOD faces in conducting manhunts is that the large bureaucracy does not allow sufficient flexibility for such time-sensitive and time-intensive operations. The

Department of Defense is very efficient at waging war, but the organizational structure that makes DOD efficient in war also makes it politically inflexible during peace. The U.S. military has made waging war a science, with precise calculations as to how to disrupt and destroy the enemy. Yet, finding a PONI is more an art then science. To find and apprehend a PONI takes creativity and thought. Some of the most unimportant-seeming facts are often essential in unraveling where and how fugitives hide. This is why many of the most successful manhunts have been conducted by small flexible units of between 3-10 men, the hunt for the Black September Organization (BSO) being a case in point.

In his Master's thesis, *The Israeli Response to the 1972 Munich Olympic Massacre*, Alexander B. Calahan compares two Israeli operations, the attempted assassination of Ali Hassan Salameh by Mossad in Lillehammer, and the use of the Avner Team. The Lillehammer operation was deemed a failure because it resulted in the exposure of seven Israeli officers and the death of two innocent civilians. The Avner team, in contrast, was more successful. During the two year deployment of the Avner team, eight of the eleven targets were killed, and the collateral damage included one KGB officer, four PLO security personnel, one freelance assassin, and two team members. What separated these two cases was that the Avner team operated outside the government's traditional organizational structure. This team had the freedom to develop the necessary intelligence and conduct the necessary operations beyond the confines of a large political bureaucracy. Due to too much compartmentalization, the Lillehammer incident was doomed from the start. Information that was vital for the mission success was rarely shared between individuals.

Although not all manhunts conducted by large bureaucratic structures are failures, cases we have studied show that most successful manhunts involve small flexible teams. With this in mind, Figure 7 outlines a potential manhunting organization with operating units of 5-7 man teams. The organization itself would be comprised of a commander or director, a deputy director, a staff, an operational research group, a technical support group, and the manhunting teams.

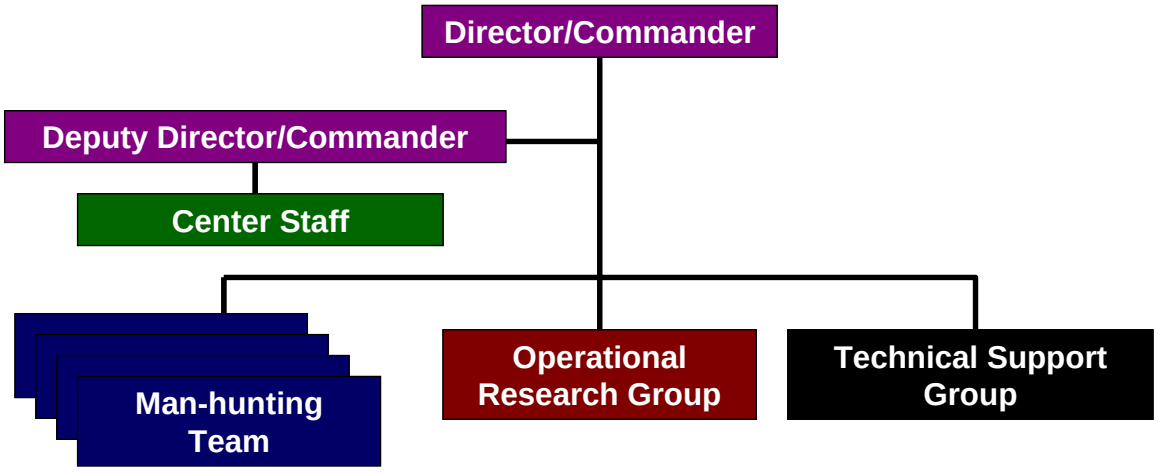

Figure 7. Proposed Manhunting Organizational Structure

The manhunting teams need to have the authority to directly access various United States government agencies. A DOD manhunting team must be able to work directly with personnel for the U.S. Marshals office, FBI, CIA, and the Treasury Department. Each entity would bring different experiences, knowledge, and organizational perspectives to manhunting. The combined effort would ensure that the whole would be stronger than the sum of its parts.

Manhunting requires small flexible units, which can work around various limitations placed on a larger centralized organization. Centralized hierarchies do not allow enough flexibility to collect the type of information necessary. Although large bureaucratic organizations are efficient in conducting specified tasks, they often do not have the flexibility to adjust to a changing environment. We would argue that for manhunting, an organization's adaptability is more important than its efficiency. From the cases we've studied, adaptability may contribute more to operational success than efficiency.

Individuals who conduct manhunts need to also have a variety of skills in interviewing, interrogating, information analysis, and surveillance. To develop these skills sufficiently, officers should not be rotating through assignments every two years or so. By rotating individuals, different hunters acquire different information at different times, but the continual rotations cause the loss of some information collected during the early phases of the manhunt. This should be mitigated. In many ways, the case officer model used by law enforcement is optimal since it leads to the development of subject

matter expertise. The lack of law enforcement investigative skills in the military restricts the type of information that can be collected on known fugitives, which further limits the unit's ability to locate the fugitive and identify support nodes.

The manhunting team size may vary depending on the importance and difficulty in collecting information on the PONI. Based on past historical examples, a manhunting team should consist of approximately seven personnel, to include operators, intelligence analysts, surveillance technicians, and communications specialists, and should have enough depth to follow multiple leads. Specifically, the team should consist of a team leader and three pairs of investigators and technicians. The investigators would be operators and intelligence analysts, while the technicians could provide surveillance and be responsible for communications. This set-up would provide flexibility and speed since the team leader could pursue multiple leads by deploying his sub-units as he saw best. Also, the team members would gain specialized manhunting skills by attending the proposed manhunting training course. This focused, small team effort would also allow for the development of subject matter expertise on specific PONIs.

As depicted in Figure 7, the centralized control unit would consist of the director, deputy director, and staff. This control element would serve to coordinate and integrate information collected by the manhunting teams, as well as assigning them their targets. Beneath the command element would be the organizational research group, and the technical support group. The organizational research group would collate data into a central data bank and would also do high end analysis, to include such activities as link, social, and information analysis to support the manhunting teams. The technical support group would then provide the necessary technical support to conduct surveillance and communication. The technical support group would also be responsible for developing technologies to be used to target specific PONIs.

B. AN ORGANIZATIONAL PROCEDURE

Thus far, we have described an analytical process and an organization. Yet, there needs to be some type of procedure that integrates the two. The diagram in Figure 8 outlines the organizational procedure or scheme of maneuver for conducting manhunts. This procedure starts with the organizational research group (ORG) developing a list of Persons of National Interest (PONI). This list may fall under a tier system, where Tier 1

includes the PONIs who are to be either killed or captured. Tier 2 are those PONIs who are to be located and tracked for intelligence collection purposes, and Tier 3 PONI's are individuals whose status is currently unknown and about whom further research is needed.

This list is then given to the director or commander for approval. The commander designates a manhunting team to conduct the manhunt, and provides them with his guidance. The manhunting team begins the manhunting process and generates information requirements, leads, and a method of collection. During this phase, the manhunting team coordinates with the operational research group (ORG) and the technical support group (TSG). The manhunting team briefs the commander on the information it needs, leads to be followed, and its proposed methods of collection. Ideally, the commander will subsequently approve the proposal and authorize the team to conduct actions against the information requirements and/or PONI.

The manhunting team must then begin the investigation. During this investigation, the manhunting team should produce: 1) additional leads that will be placed into the queue for further investigation, 2) points of exploitation to gain additional information that is not forthcoming by direct interaction with known or past associates, 3) the location of the PONI, 4) the identification of additional targets or PONIs. In some cases, the investigation may lead to a dead end, and when this happens, the manhunting team will have to reassess its assumptions and information. The manhunting team will then create a new course of action to find the target.

As shown in Figure 8, the method of investigation or collection is either covered, non-covered, or contracted. In a covered investigation the hunter assumes a false identity or uses a cover story to elicit information, which under normal circumstances would not be given by the PONI's friends or family members. In a non-covered investigation the manhunting team represents itself without any false pretext. In a contracted investigation a private organization or company is hired to obtain crucial information.

For example, the manhunting team can use a cover story to exploit a PONI's parents. The manhunting team can call the parent and explain that his or her son has a refund check pending his signature. The team can send a small check to the parent's

residence and wait until the PONI cashes the check. In this case, the manhunting team has verified that at least one parent is in contact with the PONI. The manhunting team may also produce a source who has knowledge of the PONI's location. This would allow the manhunting team to place active surveillance on the PONI and send the necessary information to the director. The director could then initiate a joint planning group to conduct a follow-on operation to either track or apprehend the PONI. The apprehension of the PONI can be either covert, clandestine, or overt. These actions include the use of direct action units to neutralize him.

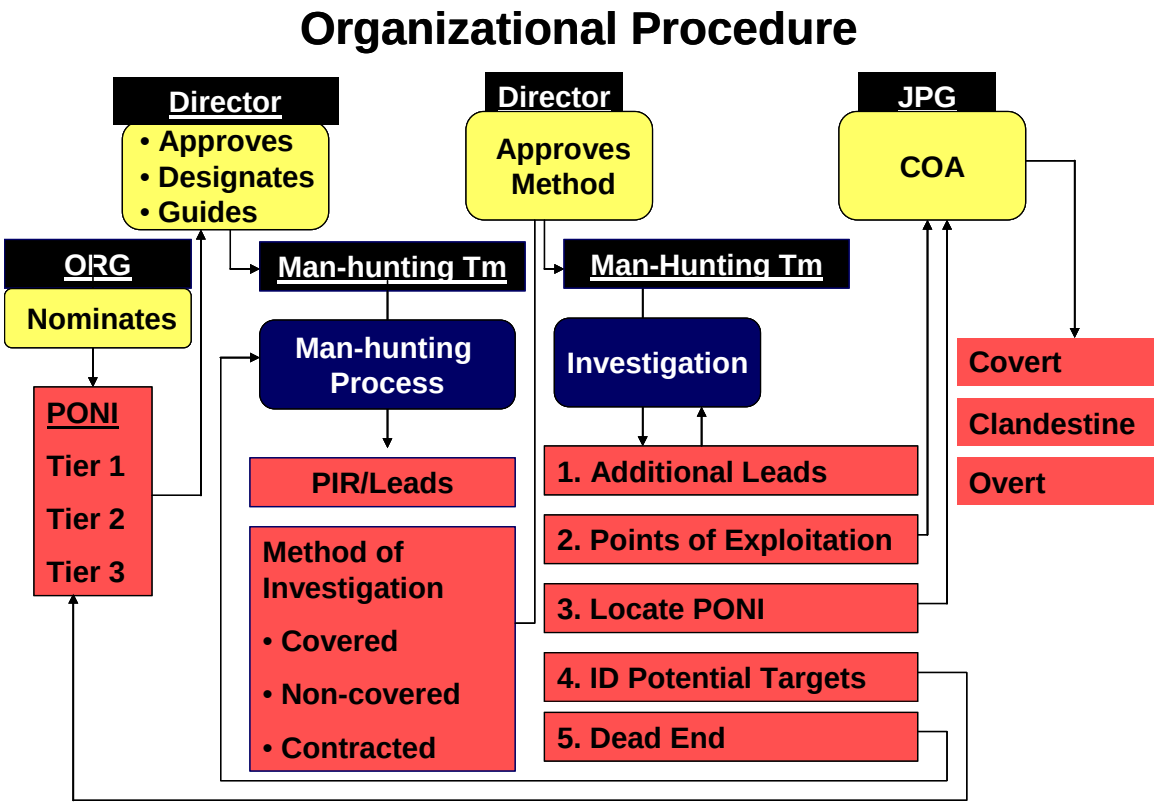

Figure 8. Organizational Procedure

This organizational procedure allows for maximum flexibility for the manhunting team while maintaining centralized control. Additionally, this procedure will also yield a set of metrics. Given the fact that this method is structured around an input–output model, it should be possible to measure outcomes. Studying these outcomes should enable the organization to measure its effectiveness in finding and apprehending elusive individuals. For example, Measures of effectiveness (MOE) include the number of leads generated, points of exploitation identified, confirmed locations of the target, and the

identification of additional persons of interest. These MOE can then be compared to the number of offensive operations that resulted in the successful apprehension of the PONI. Correct analysis should identify why certain individuals have evaded capture, and determine what types of measures need to be taken to improve apprehension success rates.

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IX CONCLUSIONS

A. THE FOUNDATION

The purpose of this thesis has been to explore manhunting, and to develop a formal process that can be used by law enforcement, intelligence analysts, and military planners to capture Persons of National Interest (PONI) wanted by the United States government. In particular, we have proposed a systematic, future-oriented approach to locate and target PONIs. This involves the development of an analytical process, organizational structure and procedures, and the identification of manhunting strategies to identify and locate PONIs.

This thesis represents the first attempt to formalize a process that has traditionally developed through years of on the job training (OJT) in the law enforcement community. The manhunting process we describe can assist the analyst by providing a systematic method for identifying potential hiding locations and see through denial and deception. This iterative process will also help the analyst identify key individuals in the PONI's network. These individuals, once identified, can lead the hunter to the PONI's location. The advantage to this process is that it will yield information that can be graphically displayed on a map, thus providing increased clarity.

One of the key tools we introduce is Nexus Topography (NT) The intelligence community's current framework to identify a PONI's network has various shortcomings that hinder the analyst's abilities to find PONIs like Usama bin Laden. However, using NT, intelligence analysts can create a better picture of the PONI's *overall* social universe by accounting for relationships in terms of time, space, *and* affiliation. NT provides the intelligence community with a logical, adaptable, and constantly updatable model that provides a comprehensive and dynamic map of a PONI's potential network(s). Ultimately, mapping these networks will allow analysts to conduct better targeting of the PONI and the subsequent dismantling of his organization

This thesis also offers an organizational structure and procedure for conducting manhunts. We envision small, decentralized five to seven manhunting teams that report to a centralized information collection unit. A flattened hierarchy of this type is more

flexible than current structures within the Department of Defense, but also offers a method to monitor the manhunting team, which allows for effective control.

B. THE ROAD AHEAD

Although we believe we offer a sound process, much work remains in terms of developing a comprehensive manhunting strategy for the United States government. This strategy is necessary if we ever hope to have a robust, coordinated effort at local, national, and international levels when it comes to identifying and locating PONIs. At the moment, no one government agency has taken the lead. No one focuses on bringing together what we regard as three key components of an interagency manhunting strategy: doctrine, training, and operational structure. These three pillars need to be researched in depth, developed, and then implemented by one lead entity to ensure that a seamless and proactive manhunting system is available for American decision makers. What might these three pillars look like? Although there are a variety of possible answers, the following should serve as springboard for further consideration.

1. Doctrine

No U.S. governmental agency has yet developed any doctrine on manhunting. Although one would expect the Department of Justice to have written rules, procedures, or principles on manhunting, so far no such documents have been identified. Nor has the Department of Defense developed any doctrine on how to locate and capture individual PONIs. The apparent lack of doctrine or standardized manhunting procedure calls into question the ability of the United States government to target and capture known PONIs. Unfortunately, manhunting has also failed to capture the attention of academia. The research that has been done is that undertaken on the job by skip tracers and bounty hunters, and the majority of this concerns the licensing and legal aspects of bounty-hunting. Consequently, no substantial body of knowledge or collated set of best practices exists anywhere.

The USG needs to develop a basic doctrine before it can begin to enact even an initial manhunting strategy. It would be unwise to devote substantial time, money, and personnel unless there was at least some basic understanding of how PONIs hide and what tactics, techniques, and procedures (TTPs) truly work against them. Since these two subjects can be researched, an official study needs to be undertaken. Given time

constraints, limited resources, and the organizational culture within the Department of Defense, it may make sense to contract out such a study. Not only should this research yield an across-the-board study on how PONIs hide based upon the category of PONI and who he is trying to evade—local, national, or international level manhunters —but, researchers would need unprecedented access and honest feedback from *all* agencies involved in manhunting in order to gauge current USG abilities. This could well require a Presidential directive. Regardless, the goal should be to evaluate and draw from the raw data a number of working themes that would be consolidated into key principles. In turn, these principles should serve as the starting point for developing a USG manhunting doctrine.

2. Training

Currently, DOD personnel receive very limited training in the skills necessary to be effective manhunters. The Department of Justice, in contrast, fields the U.S. Marshals, who not only have unique skill sets not currently developed or trained by the military, but offer a model for organizational structure and procedures. Skills that law enforcement personnel have worth drawing on include being able to conduct interviews, detect ambiguities in a story, conduct surveillance, and prosecute investigations to solve complex problems. However, law enforcement in general and the U.S. Marshals in particular, do not have much experience operating overseas in diverse and, what are in many cases, dramatically different cultural environments. What may work in the U.S. may not be successful in another culture. In DOD, meanwhile, the holistic sets law enforcement possesses are not found in any one person or group. To the detriment of manhunting, DOD separates the intelligence analyst and the operator, and never integrates either skill with those of the interrogator and interviewer.

Given these points, a comprehensive international manhunting training program should be established to ensure that the USG has the properly trained personnel to carry out its strategy. The TTPs should be rooted in the doctrinal principles laid down through the research described above. Among those subjects taught should be various investigative methods, interviewing skills, surveillance techniques, analytical abilities, understanding of the interagency process, and grounding in the legal and ethical issues involved in locating and tracking individuals globally. The training should be hands-on

with a focus on using each skill set in a synergistic manner that would be tested in a field training exercise (FTX). The objective should be to produce military personnel who could serve as investigators on operational manhunting teams. Ideally, the military manhunter would possess the skills to be able to act as an interviewer, analyst, *and* operator so that he can effectively find his targets without having to rely totally on separate independent agencies. As operational teams provide after action feedback based upon their operational missions, this training should be revised and further refined. So, too, should the doctrine.

3. Operational Structure

With doctrine and training in place, operational structure—the third pillar of the strategy—can be addressed. The current JTF structure does not address the complexities inherent in manhunting. JTFs are often a collection of independent entities that do not communicate effectively outside of their constituent organizations. Additionally, those at the worker level lack an understanding of the strategic goal for their activities due to the many layers of mid-level management within the structure. When individuals lack clear guidance, they revert to familiar practices and activities since these fulfill the mission of their immediate organization even if they fail the adhoc entity's overall objectives. Also, existing organizational cultures do not grant sufficient flexibility to collect the type of information necessary since they create their own self-inhibiting biases. Finally, the practice of rotating officers over short periods of time through various organizations adversely affects the manhunting campaign by removing the subject matter experts from the case just as they begin to understand the PONI and his environment. In contrast, the most successful manhunts are historically conducted by small five to seven man units. These units have the ability to move quickly and focus on only one issue—finding their PONI. Additionally, they will report to only one boss who understands the necessity of allowing the team to dedicate itself over the long term to that single objective.

With this in mind, a new type of structure is required in order to effectively manhunt. This structure would be two-fold in nature, with one part devoted to a centralized command and control entity, while the second part involves small, decentralized hunter teams for execution. As described in this thesis, such a structure would not have to be created from scratch. Rather it could be developed from an existing

military organization such as the DIA or USSOCOM. It should be the one place where information from other government entities, such the FBI, CIA, and Treasury, as well as traditional intelligence (HUMINT, SIGINT, IMINT, MASINT, and OSINT), is brought together and analyzed. The reporting chain for the hunter teams would be from team leader to action group commander to head of the central command and control entity to a national level policy maker. Ideally, the policy maker would be the President of the United States; however, if this was not possible then the Secretary of Defense or the NSC should be the minimum level guiding their efforts.

C. CLOSING THOUGHTS

Manhunting is about identifying and locating known and unknown persons of interest. Although current events involving the War on Terrorism have much of the public relating to manhunting in terms of identifying and locating terrorists, it is important to bear in mind that manhunting encompasses much more then just hunting terrorists. It can range from finding war criminals, as in Bosnia–Herzegovina, to finding deposed leaders such as Saddam Hussein. Taken a step further, some of the greatest threats to U.S. security in the future will come from small groups of non-state actors or even individuals who will move quickly and act independently of governments or large-scale organizations. To counter such threats, the USG will need to have the capability to quickly and efficiently identify and find these targets globally. As a result, the United States government's ability to prosecute the war on terrorism today and to find and apprehend high value targets in the future depends on the its ability to develop and institutionalize a comprehensive manhunting strategy now. We like to believe this thesis offers a foundation on which to build.

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APPENDIX A. ICTY INDICTEE STATISTCS

Data provided by the Coalition for International Justice.

Indictees - ICTY

The 25 known suspects still at-large or otherwise not in the Tribunal's custody include Bosnian Serb leader Radovan Karadzic and Bosnian Serb army commander General Ratko Mladic, all four co-defendants in the Kosovo indictment against Slobodan Milosevic, Bosnian Serb General Pandurevic, the Vukovar Three and many others accused of genocide, grave breaches of the Geneva Conventions, violations of the customs of war, and crimes against humanity.

Updated: 21 October 2002

Overview

Total number of people known to have been indicted at any time	112[1]
Dead and/or indictments formally dropped	27
- of these, number killed during SFOR arrest attempts	03[2]
Total number of people now publicly indicted	**84**
Total number of known indictees at large	**25**
In the custody of the ICTY or serving ICTY sentence	**50[3]**
Awaiting transfer to the Tribunal	0
Currently serving sentence	05
Temporarily released by the Tribunal pending trial	09
Released after trial	08
Released after completion of sentence	03

Number of Arrests	45
By SFOR	26[4]
By UNTAES forces (w/ICTY Staff) in then Serb-held Croatia	01[5]
By Bosnian Federation police	06
By police in Republika Srpska	00
By police in Germany and Austria	04
By Serbia	06
By Croatia	03
By Federal Republic of Yugoslavia	00

SFOR Arrests by Sector	24
British sector	12
Dutch sector	02
German/French sector	06
U.S. sector	05
U.S./UK sector	01
NUMBER OF SURRENDERS	22

Known Whereabouts of Publicly Indicted Persons Still at Large

Bosnia: French Sector

Location	Name
Pale area (RS) (Visegrad and Trebenje)	KARADZIC, Radovan

Bosnia: UK Sector

Location	Name
Prijedor (RS)	BOROVNICA, Goran
Busovaca (Fed./Cro.)	MARINIC, Zoran

Bosnia: Unknown Sector

Location	Name
(RS)	EUPLJANIN, Stojan

Croatia:

Location	Name
Croatia	GOTOVINA, Ante
Croatia	BOBETKO, Janko

Federal Republic of Yugoslavia

Location	Name
Belgrade, January 2002	RADIC, Miroslav
Kragujevac, December 2001	RASEVIC, Mitar
near Belgrade, June 2001	LUKIC, Sredoje
Serbia, June 2000	MEAKIC, Zeljko
Belgrade, numerous sightings	MILUTINOVIC, Milan
Serbia, June 2000	JANKOVIC, Gojko
Belgrade, December 2001	TODOVIC, Savo
near Belgrade, June 2001	LUKIC, Milan
Serbia, October 2001	ZEC, Milan
Belgrade, July 2002	SLJIVANCANIN, Veselin
Belgrade	PANDUREVIC, Vinko
Serbia, October 2001	KOVACEVIC, Vladimir
Serbia, November 2001	MILOSEVIC, Dragomir
Serbia, June 2001	ZELENOVIC, Dragan
Serbia, September 2002	BOROVCANIN, Ljubomir

Unknown Whereabouts

BEARLA, Ljubisa
NIKOLIC, Drago
POPOVIC, Vujadin
RAJIC, Ivica

DETAILS OF ARRESTS

Name	Date/Place of Arrest	Arresting Force
ALAGIC, Mehmed (Bosniak)	08/02/01 Sarajevo Bosnia	Bosnian Gov. (provisionally released)
ALEKSOVSKI, Zlatko (ethnic Maced./CR citizen)	04/28/97	Croatian Government
BANOVIC, Nenad	11/08/01	Serbian Government (released, indictment withdrawn)
BANOVIC, Predrag	11/08/01	Serbian Government
BLAGOJEVIC, Vidoje	10/08/01	SFOR (UK)
BRDJANIN, Radoslav (BS)	07/06/99 Banja Luka, RS Bosnia	SFOR (UK)
CESIC, Ranko (BS)	05/26/02 Serbia	Serbian Government
DELALIC, Zenjil (Bosniak)	03/--/95 Munich, Germany	German Police, acquitted and released by ICTY
DELIC, Hazim (Bosniak)	05/02/96 Federation, Bosnia	Bosnian Federation Government.
DERONJIC, Miroslav (BS)	07/0702 Bratunac, RS, Bosnia	SFOR (US)
DJUKIC, Dorde	01/30/96	Bosnian Federation Government
DOKMANOVIC, Slavko (BS)	06/27/97 Erdut, Croatia (E. Slavonia)	ICTY/UNTAES, deceased
DOSEN, Damir (BS)	10/25/99 Prijedor, RS, Bosnia	SFOR (UK)
ERDEMOVIC, Drazen (BC)	03/30/96	Yugoslav Government
FURUNDZIJA, Anto (BC)	12/18/97 Vitez, Bosnia	SFOR (Dutch, UK Sector)
GALIC, Stanislav (BS)	12/20/99 Banja Luka, RS, Bosnia	SFOR (UK)
HADZIHASANOVIC, Enver (Bosniak)	08/02/01, Sarjaevo, Bosnia	Bosnian Federation Gov.(provisionally released)
JELISIC, Goran (BS)	01/22/98 Bijeljina, RS, Bosnia	SFOR (US)
KOLUNDZJA, Dragan (BS)	06/07/99 Prijedor, RS, Bosnia	SFOR (UK)
KOS, Milojica (BS)	05/25/98 Banja Luka, RS, Bosnia	SFOR (UK)
KOVAC, Radomir (BS)	08/02/99 Foca, RS, Bosnia	SFOR (German and French, French Sector)
KOVACEVIC, Milan (BS)	07/10/97 Prijedor, RS,	SFOR (UK), deceased

	Bosnia		
KRAJISNIK, Momcilo (BS)	04/03/00	Pale, RS, Bosnia	SFOR (French, German and others, French Sector)
KRNOJELAC, Milorad (BS)	06/15/98	Foca, RS, Bosnia	SFOR (French and German, French Sector)
KRSTIC, Radislav (BS)	12/02/98	Bijeljina, RS, Bosnia	SFOR (US)
KUBURA, Amir (Bosniak)	08/02/01	Sarjevo, Bosnia	Bosnian Federation Government (provisionally released)
KUPRESKIC, Vlatko (BC)	12/18/97	Vitez, Bosnia	SFOR (Dutch, UK Sector)
KVOCKA, Miroslav (BS)	04/08/98	Prijedor, RS, Bosnia	SFOR (UK)
LANDZO, Esad (Bosniak)	05/02/96	Federation, Bosnia	Bosnian Federation Government
MARTINOVIC , Vinko(BC/C)	08/09/99		Croatian Government
MILOSEVIC, Slobodan (S)	04/28/01	Belgrade, Yugoslavia	Serbia Government
MRDJA, Darko (BS)	06/12/02	Prijedor, RS, Bosnia	SFOR (UK)
MUCIC, Zdravko (BC)	03/08/96	Vienna, Austria	Austria
NALETILIC, MLaden (BC/C)	03/21/00		Croatian Government
NIKOLIC, Dragan (BS)	04/21/00	Vlasenica, RS, Bosnia	SFOR (US)
OBRENOVIC, Dragan (BS)	04/15/01	Zvornik, RS, Bosnia	SFOR (US)
PRCAC, Dragoljub (BS)	03/06/00	Jelicka, RS, Bosnia	SFOR (UK)
RADIC, MLaden (BS)	04/08/98	Prijedor, RS, Bosnia	SFOR (UK)
SIKIRICA, Dusko	06/25/00	Prijedor, RS, Bosnia	SFOR (UK)
STAKIC, Milomir (BS)	03/23/01	Belgrade, Yugoslavia	Serbia Government
STANKOVIC, Radovan (BS)	07/09/02	Foca, RS, Bosnia	SFOR (German and French, French Sector)
TADIC, Dusko (BS)	02/13/94	Munich, Germany	German Government
TALIC, Momir (BS)	08/25/99	Vienna, Austria	Austrian Police
TODOROVIC, Stevan (BS)	09/27/98	RS, Bosnia	SFOR (US) - after capture in Serbia by British special

		forces
VASILJEVIC, Mitar (BS)	01/25/00 Visegrad, RS, Bosnia	SFOR (French and German, French Sector)
VUKOVIC, Zoran	12/23/99 Foca, RS, Bosnia	SFOR (German (and French?), French Sector)

DETAILS OF SURRENDERS

Name	Date of Surrender	Surrendered to ICTY by:
ADEMI, Rahim (ethnic Albanian/CR Citizen	07/25/01	Self
BLASKIC, Tihomir (BC)	04/01/96	Self[6]
CERKEZ, Mario (BC)	10/06/97	Self *
FUSTAR, Dragan	1/31/02	Self
HALILOVIC, Sefer	9/25/01	Self
GRUBAN, Momcilo (S)	05/02/02	Self
JOKIC, Miodrag	11/12/01	Self
JOKIC, Dragan	08/15/01	Self (provisionally released pending trial)
JOSIPOVIC, Drago (BC)	10/06/97	Self *
KNEZEVIC, Dusan	05/18/02	Self
KORDIC, Dario (BC)	10/06/97	Self
KUNARAC, Dragoljub (BS)	03/04/98	Self
KUPRESKIC, Mirjan (BC)	10/06/97	Self *
KUPRESKIC, Zoran (BC)	10/06/97	Self *
LJUBICIC, Pasko	11/12/01	Self
OJDANIC, Dragoljub (S)	04/25/02	Self
MARTIC, Milan	05/15/02	Self
MRKSIC, Mile	05/15/02	Self
PAPIC, Dragan (BC)	10/06/97	Self *
PLAVSIC, Biljana (BS)	1/9/01	Self (provisionally released pending trial)
SAINOVIC, Nikola	05/02/02	Self
SANTIC, Vladimir (BC)	10/06/97	Self *
SIMIC, Blagoje (BS)	03/11/01	Self
SIMIC, Milan (BS)	02/14/98	Self
STRUGAR, Pavle	10/21/02	Self (provisionally released pending trial)
TADIC, Miroslav (BS)	02/14/98	Self
ZARIC, Simo (BS)	02/24/98	Self
ZIGIC, Zoran (BS)	04/16/98	Self

1 Not including Slavko DOKMANOVIC and Milan KOVACEVIC, who both died while proceedings against them were continuing and not including Slobodan MILJKOVIC who was reported killed in Serbia on August 8, 1998.

2 Simo DRLJACA (BS), died resisting arrest by British SFOR forces in Prijedor, RS, Bosnia on July 10, 1997; Dragan GAGOVIC (BS), reported by French SFOR to have been killed during an arrest attempt on January 9, 1999 in Foca; Janko JANJIC (BS) blew himself up with a hand grenade as German SFOR troops tried to arrest him on October 12, 2000 in Foca.

3 Not including temporarily released suspects

4 Including Milan KOVACEVIC, who has since died. Does not include three indictee deaths during arrest attempts.

5 Slavko DOKMANOVIC committed suicide while in detention.

6 Surrendered after negotiations between US Secretary of Defense William Perry and Croatian Minister of Defense Gojko Susak.

* Surrendered with assistance of the Croatian government, after the US government and allies threatened to vote against funding by international financial institutions for Croatia. Two other Bosnian Croats, Marinko KATAVA and Ivan SANTIC, also surrendered in this group but they were later released after their indictments were dropped due to insufficient evidence.

Sources: Elections results from OSCE; whereabouts from USG map 475416 (R00855) 2/98; information on arrests and surrenders from ICTY press releases and established news sources, including AP, Reuters, and The Guardian.

APPENDIX B. MANHUNTING CASE STUDY LIST

Individual	Summary
Pablo Escobar	Famous Columbian Drug lord who turned himself in to Columbian Authorities in 1991 to avoid extradition to the U.S. On 22 July 1992, he escaped from prison and remained on the run until he was killed by Columbian government in a shoot out in December 1993. In 1992, the Columbians created a special organization called the search block. Escobar was found hiding in a middle class barrio in Medellin Columbia.
Usama bin Laden	Leader of al-Qaeda terrorist network who has been on the run from U.S. authorities since 1998. Current whereabouts are unknown, but he is suspected of being in the Northwest Frontier Province. Bin Laden has evaded numerous assassination attempts on his life.
Mir Amal Kasi	Attacked CIA headquarters in 1993 and was apprehended in Pakistan in 1997. He was convicted of shooting 5 people outside CIA headquarters, and later put to death by lethal injection in the Virginia State prison. Kasi was found in Baluchistan.
Eric Rudolph	In 1998 Eric Rudolph was wanted as a suspect for the Olympic Park bombings in 1996. The FBI conducted an extensive manhunt in the mountains of North Carolina without success. After a five-year period, Rudolph was picking through trash at a local Sav-A-Lot, when he was apprehended by a rookie police

	officer. Rudolph was sentence to four consecutive life terms.
Pancho Villa	Pancho Villa was the first foreign guerrilla/terrorist to attack the United States. In 1916, Villa led 1,500 Villistas into Columbus, New Mexico and killed 17 residents. President Wilson sent General Pershing into Mexico to capture Villa. Unfortunately, the Pancho Villa expedition was a failure. In 1923, Villa was assassinated in Parral Chihuahua.
Black September Organization	The BSO was a Palestinian paramilitary organization responsible for the deaths of 11 Israeli athletes during the 1972 Olympic games in Munich, Germany. By 1979, 8 of the 11 members responsible for the attack were killed by Avner team created from the Mossad.
Theodore John Kaczynski	Kaczynski was the target of the FBI's most expensive manhunt ever. Over 18 years, Kaczynski evaded identification. It wasn't until Kaczynski's younger brother David recognized the handwriting of Ted's manifestos that the FBI was finally able to identify the Unabomber. Ted Kaczynski was arrested in April of 1996.
Abimael Guzmán	Abimael Guzmán was the leader of the shining path—a Maoist insurgency in Peru. The Peruvian National Directorate Against Terrorism received various leads that members of the shining path had safe houses in Lima. The directorate began casing various residences, and found empty tubes of cream for the treatment of Psoriasis, a skin disease Guzman was known to have. Guzman was arrested in 1992 and sentenced to life imprisonment.

John Dillinger	John Dillinger was a famous bank robber in the 1930s. Dillinger was arrested on 22 July 1934 after a brothel owner, Anna Sage, turned over Dillinger's location. Anna Sage gave up Dillinger's location to avoid being deported to Romania.
Ilich Ramírez Sánchez	Better known as "Carlos the Jackal" was responsible for the attack on the OPEC headquarters in Vienna. In 1994, the Sudanese government turned over Sanchez to French authorities. The CIA played a pivotalrole in finding Sanchez in Khartoum, Sudan. A small 4-man element identified Sanchez's body guard near a hospital. The CIA team confirmed Sanchez's presence in Khartoum, which enabled the French to put political pressure on the Sudanese.
Saddam Hussein	On 13 December 2003, the U.S. military captured Saddam Hussein in an underground hide site near his home in Tikrit. U.S. forces were able to identify key individuals in his support network, which allowed the U.S. to quickly close in on his location.
Ratko Mladic	Mladic was the leader of the Bosnian Serb Army and is wanted for war crimes by the International Criminal Tribunal. Mladic has evaded capture since December of 1995, and is currently suspected of hiding in Serbia.
Radovan Karadic	Karadic is the former leader of the Serb Democratic Party in Bosnia. He is currently indicted for war crimes by the ICTY. Karadic has evaded capture since the beginning of 1996. He is currently believed to be hiding in the southeast portion of Bosnia

	Herzegovina.
Khadaffy Janjalani	Khadaffy Janjalani is the leader of the Abu Sayyaf Group responsible for capturing three U.S. citizens. Janajalani has evaded capture by the Philippine government since his escape from prison in 1995. Janjalani is believed to be operating in Southern Mindanao.
Khalid Shaikh Mohammed	KSM is a member of the al-Qaeda network and is believed to be the mastermind behind the 9-11 attacks. On 1 March 2003, the Pakistani ISI reportedly captured KSM in Rawalpindi, Pakistan. He was then transferred to U.S. custody.
Riduan Isamuddin (aka Hambali)	Hambali was the leader of the Jemaah Islamiyah—a terrorist network with strong ties to al-Qaeda. Thai police found Hambali in Auytthaya, Thailand just 75 km north of Bangkok. The manhunt for Hambali last just 20-months, and he is currently detained by the United States government.

APPENDIX C. DEFINITIONS

counter-leadership operations

The employment of strategic forces in an effort to destroy, or render impotent, selected enemy military, government, or group leadership under any circumstances by which hostilities may be initiated.

investigation

A research process used to collect detailed information on a specific individual, group, or organization with the intent to use the acquired information in a follow on operation. An investigation may include traditional intelligence collection functions to gather data, but slightly differs in the ability and methods used to question and interview selected individuals.

manhunt

An organized, extensive search for a person of national interest conducted as a special operation in hostile, denied, or politically sensitive environments that employ specialized military capabilities to identify, locate, neutralize or capture designated individuals. Manhunts differ from typical surveillance, reconnaissance and direct action missions by the degree and methods used to search for, investigate and apprehend the targeted individual(s).

man-hunting method

A specific tactic, technique or procedure used by special operators to identify, and locate individuals of national interest. A man-hunting method may or may not include traditional intelligence collection methodologies.

man-hunting team

An element or unit specially selected, trained and organized to identify and locate a person of national interest. The man-hunting team may or may not be responsible for the apprehension of said individual.

Persons of National Interest (PONI)

Any individual designated by the President of the United States (POTUS) or the Secretary of Defense (SECDEF) as an individual that poses a direct threat to national interest. Persons of National Interest include, but are not limited to persons indicted for war crimes, terrorists, enemy combatant leadership, and insurgents.

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